


UNIVERSITY OF TORONTO



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REPORT
OF THE
IMPERIAL EDUCATION CONFERENCE
—
1911



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A. H. C. Colquhoun

Toronto, June 30, 1911
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REPORT

OF THE

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IMPERIAL EDUCATION CONFERENCE

1911.

Presented to both Houses of Parliament by Command of His Majesty.



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REPORT OF THE IMPERIAL EDUCATION CONFERENCE, 1911.

PART I.

SPEECH BY THE PRESIDENT OF THE BOARD OF EDUCATION OPENING THE MORNING SESSIONS OF THE CONFERENCE.

The PRESIDENT OF THE BOARD OF EDUCATION (The Right Hon. Walter Runciman, M.P.), who was accompanied by Mr. C. P. Trevelyan, M.P., Parliamentary Secretary to the Board of Education, said: Gentlemen, I wish, in the first place, to extend to you, on behalf of His Majesty's Government, a very warm welcome to London, and to the premises in which you are now accommodated. When last most of you, or a large number of you, were assembled in London for the purpose of discussing Imperial Educational Affairs, the Conference was convened by the League of the Empire, which has done admirable work at home and abroad, but it was naturally felt that an assembly of great officials from the Dominions and the Crown Colonies, and from India, and from the United Kingdom, should be summoned in future by the Imperial Government.

During the last four years arrangements have been maturing for the gathering which we now have here to-day, and I think we may say that of the Imperial Conferences which are now about to assemble, this Conference is by no means the least important.

The work, which is done by your separate departments, and by our departments at home, concerns matters of the greatest Imperial interest, and we have been working up to the point of the present Conference on the basis of the arrangements which were made, or sketched, in 1907, and which have rapidly matured in the course of four years' experience. I would draw your attention to the fact that many of the recommendations which were made at that time by the Conference which then assembled, have passed the stage of mere initiation. It was arranged then that for the convenience of the Home Departments, and the Departments Overseas, there should be a completer circulation of reports and documents on educational topics. That has been furthered to a large extent. And the memoranda

which have been exchanged between this country and the Dominions, and the Colonies, and India, have been, I may say, of the greatest value to us at home, and I hope they have been of some value to you overseas.

The Library has moreover been greatly extended, and we send now around to the departments overseas an account of all additions made to the Library; and we are bit by bit accumulating one of the finest collections of educational literature to be found anywhere in the world. Then, there has been a regular collection and circulation of information with regard to teachers and teachers' qualifications, and one of the important topics which will be under discussion in this room during this week will be concerned with this important subject. Dr. Heath, the Director of Special Inquiries, with the co-operation of the Assistant Director, Mr. Hornell, has been in direct communication with India, and the Dominions and the Crown Colonies, with regard to the appointments to teacherships. I am unable to say exactly how many have been recommended up to date, but I understand that the latest figures which Dr. Heath has just handed to me show that the total number of appointments dealt with by the Office of Special Inquiries and Reports here, is 72 to India, 41 to the Crown Colonies, and 12 to the Dominions. That is a service which does not appear very much on the face of it, but I hope it has been of some use and assistance to those who have to make important appointments abroad.

Besides the work of the Director, a good deal has been done in the way of circulating, not only information, but persons, if I may so put it. We have made arrangements whereby English teachers, who take advantage of the facilities given in French and German schools, should not only be those from England, but also those from the Dominions. Some such teachers have already taken advantage of the arrangements which we have made with the French and German Governments.

Then the amount of work which is done here personally you can speak of much more closely than I can. A number of you have, from time to time, been in close communication with Dr. Heath and Mr. Hornell, and with the Department, and I hope you are able to say that there has been useful assistance given to you on your visits here to London.

Well, gentlemen, that is work of a preliminary character, but it shows that the basis of imperial organisation, and imperial assistance can be carried further, and I trust that the gathering we have here to-day, and which will meet every day this week, will do a good deal towards solving many of the administrative problems by which we are faced.

We shall have in this room to face the difficulties which surround the administration of education in every part of the Empire, and I think it is well on the whole that you should yourselves have decided that for the present you will discuss your technical difficulties in private, and no doubt you will be able to get over some of the difficulties. At the end of the week you will arrange just as you please, exactly what reports shall be communicated to the Press and circulated for the information of our respective Governments, yours and ours.

I think it would be convenient, as our administrative discussions are to go on every day, that Dr. Heath, who has acted as Director of Special Inquiries and Reports during the last four years, should take the Chair, as unfortunately I am not able to be here every day. You know our official duties—Cabinets and Cabinet Sub-committees and so forth—demand a good deal of one's time and I am sure you could have no one who would be more sympathetic in the Chair than Dr. Heath. I would therefore suggest to you that he might take the Chair, and with your concurrence I would ask him now to take that post; and perhaps without consuming any more time we might at once proceed to business. We are met here after all, not for the purpose of making speeches, and least of all for having our speeches reported. I presume that you would wish to get through the very long programme with which you are faced without any undue delay, and I will, therefore, conclude, as I began, by extending to you on behalf of the Government the very warmest welcome here to London, the seat of the Imperial Government, and ask that you will give us your advice as unstintedly as we shall be glad to place our services at your disposal.

REPORT OF THE CONFERENCE.

ADOPTED AT THE FINAL SESSION ON MONDAY,
MAY 1ST, 1911.

1. The Imperial Education Conference of 1911 was convened by His Majesty's Government, through the Board of Education, the Colonial Office, and the India Office, in accordance with the undertaking given by the British Government in May 1907, in response to the unanimous request then made to that effect by the official Delegates of the Overseas Dominions and Colonies who attended the Federal Education Conference convened that year by the League of the Empire.

The Imperial Education Conference 1911, consisted of representatives nominated for the purpose by the several Education Departments throughout His Majesty's Dominions. A list of these departments, and of their representatives will be found in Appendix I. to this part of the Report (*see* pages 21-22). The number of representatives who actually attended was 47.

2. The Conference met from Tuesday, April 25th, until Monday, May 1st, holding ten meetings in all, besides two Committee meetings. The Secretary of the Conference was Mr. Hornell, Assistant Director of Special Inquiries and Reports at the Board of Education. The morning Sessions of the Conference were held in private at the Offices of the Board of Education in Whitehall; the Board's Director of Special Inquiries and Reports being Chairman. Its afternoon sessions were held on the 25th, 26th, 27th and 28th April, in the Conference Room of the Foreign Office, Downing Street, in order to have more space, because at these sessions representatives of various Public Bodies and Educational Associations (a list will be found in Appendix II. to this part of the Report [*see* pages 23-24]), and many educational officials and experts were invited to be present and the Press were admitted. The Right Honourable Walter Runciman, M.P., President of the Board of Education, presided at all the afternoon Sessions. A report of the afternoon Sessions of the Conference, with a full report of the papers read, will be found in the second part of this volume (*see* pages 42 ff).

3. The morning Sessions of the Conference, preceded by a preliminary meeting on the afternoon of Monday, April 24th, were held on the 25th, 26th, 27th, and 28th

of April and the 1st of May; there was also an afternoon meeting on the 1st of May, attended only by official representatives.

4. A preliminary meeting of Members of the Conference was held at the Offices of the Board of Education on Monday, 24th April, at 3.0 p.m., in order to consider and determine the procedure and order of business for the Conference. At this meeting, after a few words by the Secretary of the Board of Education of welcome to the Members of the Conference, and of respectful memory of Mr. S. H. Butcher, who had been Chairman of the 1907 Conference, the representatives voted Dr. Heath, the Director of Special Inquiries and Reports, into the Chair. The Chairman then called the attention of the representatives to a Proof Agenda Paper which was on the table. It had been prepared in order to facilitate discussion and was based upon the replies received by the Home Government from the various Governments of the Empire, in response to official despatches sent to them, first in March 1910, and again in December 1910. It had been circulated in typewritten form, in the course of the previous week, so as to reach all the official representatives on their arrival in England with a note explaining that it was intended simply as a basis for discussion. The earlier drafts (above referred to) of the Agenda Paper which had been circulated to the Governments of the Empire through the Colonial and India Offices had been accompanied in each case by a request that they might be criticised, amended, and added to; and the draft submitted to the meeting of the representatives on Monday had been prepared in accordance with the replies thus received, and contained all the suggestions as finally made by the various Governments concerned.

5. As a result of the discussion upon the draft Agenda Paper, the representatives unanimously decided to devote the first two morning Sessions of the Conference to a consideration of the following subjects :—

- I.—A statement by the Director of Special Inquiries and Reports on the subjects discussed at the Education Conference in 1907 and the action subsequently taken on the various points raised thereat.
- II.—The consideration of the memoranda prepared by the Office of Special Inquiries and Reports

on Schools for General Education in the Self-Governing Dominions.

- III.—Arrangements for the mutual recognition of Teachers' Certificates.
- IV.—The recruiting of candidates for educational appointments in the Overseas Dominions including India.
- V.—The confirmation of the qualifications of teachers qualified for employment in Public Elementary Schools who wish to emigrate to the Overseas Dominions.
- VI.—The collection and dissemination of information regarding cost of instruction and cost of living in connection with advanced Technical Colleges and Universities.
- VII.—The question of the continuance of the Board's Science and Art Examinations in the Overseas Dominions in view of the changes contemplated in those Examinations.
- VIII.—The consideration of a representation by the Goldsmiths' College Delegacy of the University of London that the facilities afforded by the Goldsmiths' College for the Training of Teachers should be made known to the Governments of the Overseas Dominions.
- IX.—The question of the desirability of the formation of an Imperial Education Bureau.

It was further decided to devote the second two morning Sessions of the Conference to a number of educational problems of interest. The representatives also expressed the desire, in view of the number of subjects to be discussed, that the Sessions of the Conference might be extended into the following week, and it was agreed that, if necessary, the Conference should meet on Saturday or Monday at any time. It was also agreed that, should the Conference think it desirable to make a communication to the Press, it should be dealt with by a carefully drafted statement made by the Secretary on the instructions of the Conference, which, if approved, would then be issued; and, further, that until any official communication was agreed upon by the whole Conference, no member should communicate any detail, however small, to the Press.

6. The first Session of the Conference was opened by the President of the Board of Education for England and

Wales, the Right Honourable Walter Runciman, M.P., accompanied by Mr. C. P. Trevelyan, M.P., Parliamentary Secretary to the Board. After an address of welcome to the representatives, which will be found at the beginning of this Volume, (*see* pages 4-6), the President proposed, and it was agreed, that the Director of Special Inquiries and Reports should act as Chairman of the Conference.

7. The Conference commenced business by the consideration of a Memorandum (*see* Appendices III. and IV. to this part of the Report, pages 24-32), which had been prepared by the Office of Special Inquiries and Reports and circulated with the draft Agenda above referred to in March, 1910, by the India Office and Colonial Office to all the Governments concerned. The Memorandum briefly summarised the subjects discussed and the recommendations made by the Conference of Official Representatives which met as part of the Federal Conference on Education summoned by the League of the Empire in 1907. It also summarised the discussions that took place at two private Conferences held at that time at the Board of Education between the official representatives from Overseas and representatives of the Home Government Departments concerned. It further gave an account of the steps taken since that Conference to carry out the recommendations made at the various meetings held in 1907.

As a result of the discussion on this Memorandum, the following resolution was unanimously adopted—

- “(i) That this Conference hopes that the several
 “ Governments will assist the Office of Special
 “ Inquiries and Reports in suitable arrange-
 “ ments for the publication of material already
 “ in the process of collection as to the qualifi-
 “ cations of teachers, with a view to obtaining
 “ mutual recognition of Teachers’ Certificates,”
 (Item III. of Agenda).

8. The Conference also considered a Memorandum* submitted by the Director of Special Inquiries and Reports on the procedure adopted by the India Office in connection with appointments to educational posts in India (Item IV.), and a discussion followed upon this and upon the procedure adopted by the Office of Special Inquiries and Reports in connection with the selection of suitable candidates for those educational appointments

* The Memorandum will be found in Appendix V. to this part of the Report (*see* pages 32-37).

which are referred to that office by the Secretary of State for the Colonies. The procedure to be adopted in connection with applications made by teachers in the United Kingdom who desire educational appointments in one or other of the Self-Governing Dominions was also discussed. (Item V.)

9. In connection with Item VI. of the Agenda, the Chairman reported that a book was in course of preparation by the Office of Special Inquiries and Reports, which would give the desired information so far as the Universities of the Self-Governing Dominions are concerned.

The Conference also took into consideration the Memoranda prepared by the Office of Special Inquiries and Reports on Schools for General Education in the Self-Governing Dominions. (Item II.) It was agreed that these Memoranda would serve as a suitable introduction to a series of special monographs (*see* paragraph 20 below).

10. The Conference next proceeded to consider what arrangements might be made to facilitate selected teachers from Overseas being admitted to Training Colleges in this country, with a view to taking either the ordinary course or a special course of training suited to their needs. (Item VIII.)

In this connection a Memorandum on the suggestion of the Goldsmiths' College Delegacy of the University of London that the facilities afforded by the Goldsmiths' College for the training of teachers, should be made known to the Governments of the Overseas Dominions was circulated among the official representatives. This Memorandum is printed as Appendix VI. to this part of the Report, (*see* pages 38-41.)

11. The Conference further discussed the question of continuing to hold the present Examinations of the Board of Education in Science and in Art in the Colonies. (Item VII.) No definite decision was reached upon this point, but there was a general desire expressed on the part of the particular overseas representatives concerned that these examinations should not be completely abandoned. It was stated by the representatives of the Board of Education that the difficulties involved in the existing arrangements for these examinations might be mitigated if the Governments in those States in which the examinations were held could take some responsibility for supervising and approving courses of study by candidates who may enter for these examinations.

12. The Conference then proceeded to discuss the question of the desirability of the formation of an Imperial Education Bureau. (Item IX.)

13. The discussion on this subject was temporarily suspended in order to receive a deputation from the Joint Committee on Grammatical Terminology,* which attended in order to lay before the Conference the work they had been doing, with a view to standardising the grammatical terms used in the teaching of the several languages included in the curricula of schools. The Conference was addressed by the Deputation, which was thanked by the Chairman on behalf of the Conference and withdrew. The addresses given by the Deputation will be found in Part II. of the Report, (*see* pages 201–206.)

14. The discussion on the desirability of the formation of an Imperial Education Bureau was then resumed, and at its conclusion, the following Resolution was unanimously adopted—being the only motion made during the Conference on the subject of an Imperial Education Bureau :—

“(ii) That this Conference warmly appreciates the services which the Office of Special Inquiries and Reports has rendered to the Education Departments of the Empire, and requests the Board of Education to permit the continuance of those services, and such extension of them as will meet the needs of the various Education Departments of His Majesty’s Dominions.”

15. In connection with the foregoing Resolution, the Conference discussed what machinery might be set up to provide for the continuity of the work of the Conference, and appointed a Committee consisting of—

Mr. Board (New South Wales) ;
Mr. Fletcher (Department of Agriculture and
Technical Instruction, Ireland) ;
Dr. Muir (Union Government of South Africa) ;
Dr. Parmelee (Quebec) ;
Sir Herbert Risley (India Office) ;
Dr. Scougal (Scotch Education Department) ;
Mr. Thompson (Fiji) ; and the
Chairman of the Conference ;

* For an account of the origin and purpose of this Committee *see* Part II. of this Report, p. 201. The report of the Committee was circulated among the official representatives.

to "bring before the Conference to-morrow morning for its consideration—

"(a) proposals for the conduct of the business of future Conferences;

"(b) a statement of the services which it is desired should be rendered by the Office of Special Inquiries and Reports in future."

16. The Committee above referred to, held a meeting on the afternoon of Thursday, 27th April, and presented an Interim Report to the Conference on the morning of Friday, 28th April. The Conference considered the Report, and unanimously adopted the following resolutions:—

"(iii) That in the opinion of the Imperial Education Conference it is desirable that the delegates be confined to persons nominated by the Governments concerned;

"(iv) That the Conference recommends the appointment of a Committee in connection with the Imperial Education Conference, consisting of the accredited agents in London of the several Governments concerned, together with representatives of the Colonial Office, the India Office, the Board of Education, the Scotch Education Department, and the Irish Office.

"(v) That in the opinion of the Conference it is desirable that the functions of the Committee referred to in the previous resolution be as follows:—

"(a) to keep itself acquainted with the progress made by the Office of Special Inquiries and Reports in carrying out the work which the Conference may desire that Office to undertake;

"(b) to communicate with the several Governments concerned, when necessary, with a view to facilitating the progress of that work;

"(c) to consider the suggestions submitted in due course by the several Governments of the Empire as to subjects of discussion to be included among the Agenda of future meetings of the Conference;

“(d) to facilitate the construction of the Agenda paper by communicating, when necessary, through its individual members, with the several Governments concerned.”

17. The Conference also considered the proposals made by the Committee in connection with the second part of their reference, namely, “the services which it is desired “ should be rendered by the Office of Special Inquiries “ and Reports henceforth.”

(a) In this connection the Committee were of opinion that the Conference would be wise to do all that is in their power to facilitate the exchange of information between the different Education Departments of the Empire by recommending that all printed documents having an educational value should be furnished in triplicate as soon as possible after issue by each Education Department direct to the Office of Special Inquiries and Reports. To this end, they thought that it would greatly facilitate the object in view if arrangements could be made by which the Chief Education Officer of any Crown Colony or Presidency or Province of India were authorised to send such documents direct to the Director of Special Inquiries and Reports. On the basis of these documents it was suggested that the Office of Special Inquiries and Reports would construct a bibliography on the lines of those put forth by the Royal Society or the Bibliographical Society. Such a bibliography would be issued quarterly to all the Education Departments of the Empire, together with the quarterly list of accessions to the Board's Education Library, which is already communicated to the several Education Departments.

(β) The Committee were also of opinion that a most useful purpose would be served by the early completion of the work already initiated in collecting an accurate and orderly statement as to the conditions of recognition, classification, and payment of teachers in the Self-Governing Dominions.

(γ) The Committee were further of opinion that the volume dealing with this matter might be

supplemented as soon as possible by a further volume giving similar particulars as to teachers in those Crown Colonies which possess schools attended by Europeans, and in India so far as its European schools are concerned. To this end they suggested that the statements already prepared by the Office of Special Inquiries and Reports should be re-submitted to the several Education Departments of the Self-governing Dominions with a view to their revision and correction.

- (8) The Committee also considered what other services of a similar nature the Office of Special Inquiries and Reports might be able to render, and they were of opinion that, under the advice of the Conference, the several Education Departments of the Empire might undertake to prepare, print, and publish a series of monographs dealing with particular aspects of their education system. The Committee suggested that the Conference might make recommendations as to subjects for these monographs and as to the order in which these subjects might suitably be attacked. When this has been done, three copies of any monograph in question would be sent to the Director of Special Inquiries and Reports, who, in the first place, would include the particulars of each monograph in the next bibliographical list to appear from the Office of Special Inquiries and Reports, and who would also prepare a short memorandum summarising briefly the contents of the series in such a way as to enable easy reference to be made to them, supplementing the memorandum with a bibliography of previous and subsequent publications in the several countries concerned, together with foreign publications bearing on the same subject. The bibliography would also include any English translations that might be available of such foreign publications. These two devices would enable the Education Department of any country of the Empire (*a*) to know rapidly what had been issued in any other part of the Empire, and (*b*) to obtain a short and rapid means of surveying the monographs that had been prepared by the several

Education Departments and any foreign publications bearing upon the same subject. If this advice, however, is to have its full effect, it must be possible for any Education Department, whether in India or in a Crown Colony, to write direct to the Education Department of any country that has published a monograph or report of interest so as to obtain the desired document rapidly. This procedure would entail some modification in the present arrangements affecting the powers in this respect of Education Officers in India and the Crown Colonies, and it was suggested that the Conference might recommend the consideration of this matter by the Departments of the Imperial Government which are concerned.

18. In connection with these proposals the Conference unanimously adopted the following resolutions:—

“ (vi) The Conference recommends to the consideration of the Board of Education the suggestions set forth in the foregoing paragraphs.”

“ (vii) That the Committee of eight appointed on the 27th of April be authorised to continue their deliberations and to report to this Conference on Monday their recommendations as to the subjects that might suitably be dealt with in monographs to be prepared, printed, and published by those Education Departments of the Empire willing to co-operate, and upon the order in which these subjects may suitably be undertaken.”

19. The Conference then adjourned until the morning of Monday, 1st May.

20. At the Session of the Conference held on Monday, 1st May, the Committee presented their final report, and on their recommendation the Conference unanimously adopted the following resolutions:—

“ (viii) That this Conference recommends that the several Education Departments of the Empire should prepare, print and publish, each for their own part of the Empire, the following educational monographs in the order named—

(a) the curricula of schools for general education ;

(b) the training of teachers for schools giving general education ;

(c) the laws of compulsory attendance and their working ;

(d) the general education of children in sparsely populated areas ; and

(e) the medical inspection of schools for general education."

"(ix) That, in the opinion of this Conference, it is desirable that a monograph should be prepared by the Office of Special Inquiries and Reports dealing with the laws of compulsory attendance and their working in the chief European countries and in the United States of America."

21. The Committee also reported that they had been much impressed during the course of their discussion with the difficulties that arise in making any useful comparison between the statistics available in respect of the educational work done in the several parts of the Empire. The most fundamental of those difficulties, and the one which must be removed before any attempt could be made in the direction of a standardisation of terminology, is the variety of meanings attached to the same technical term, *e.g.*, "Average Attendance," "School," &c., in different parts of the Empire. Before any but a misleading comparison could be made on a statistical basis between the educational work done in different countries, and, still more, before any comparison could be made as to the cost per head of education of any particular grade, it is essential that a clear understanding at least of these differences of terminology should be reached, if not the adoption of uniformity. It appeared, therefore, to the Committee that the first step to be taken was the making of an accurate record of the exact meaning attached to the several technical terms used by the various Education Departments in the presentation of their statistics. Only when this has been done, will it be possible even to consider how far the adoption of a standard terminology is feasible.

22. The Conference accordingly unanimously adopted the following resolution :—

"(x) That, in order to facilitate reliable comparisons between the working of the education systems of different parts of the Empire, this Conference is of opinion that it is of great importance that

the several Education Departments of the Empire, should include in their published statistics careful definitions of all the technical terms used therein, and should provide an index thereto for facility of reference."

23. The Conference also discussed the attitude of Departments of Education to the more important movements in favour of the simplification, improvement, and uniformity of English spelling, an item on the Agenda Paper suggested by the Nova Scotian Government. The subject was opened by a paper by Dr. E. R. Edwards, one of the Secondary School Inspectors of the Board of Education, on "English Spelling and Spelling Reform," and a paper by Dr. MacKay (Nova Scotia) on the question whether Education Departments should tolerate any reformed spelling. These papers, together with a *résumé* of a speech by Dr. Viljoen (Union of South Africa), are printed in Part II. of this Report (*see* pages 207-228).

24. At the conclusion of the discussion on the simplification of English spelling the Conference unanimously adopted the following resolutions:—

"(xi) That this Conference is of opinion that the simplification of spelling is a matter of urgent importance in all parts of the Empire, calling for such practical steps in every country as may appear most conducive to the ultimate attainment of the end in view—the creation, in connection with the subject, of an enlightened public opinion and the direction of it to the maintenance, in its purity and simplicity among all English-speaking peoples, of the common English tongue.

"(xii) That the foregoing resolution be appended with an explanatory note to the printed copies of the papers on the subject read to the Conference on Friday last by Dr. E. R. Edwards, H.M.I., and Dr. MacKay, and be included in the Report of the Conference."

25. The Chairman reported to the Conference the action taken by the Committee appointed by the Conference in regard to certain statements which had appeared in a London paper on 28th April, and read the official denial of these statements which he had communicated on the instructions of the Committee to the Press.

Thereupon the Conference unanimously passed the following resolution :—

“(xiii) That the Conference approves of the action of the Committee in dealing with the matter as published in the ‘Morning Post’ of Friday and Saturday last.”

26. The Conference then proceeded to discuss the following subjects which had been placed upon the Agenda Paper by the Union Government of South Africa :—

- (1) The organisation of educational facilities for sparsely populated districts.
- (2) The boy scout movement and its relation to nature study.
- (3) Problems connected with the education of aborigines.

In connection with the third subject the Government of Sierra Leone submitted a paper by the Director of Education in that Colony on the Method of utilising local law, custom and tradition in an Educational System, and the Psychology of the Negro Child. This paper is printed in Part II. of the Report (*see* pages 228-237).

27. In connection with the question of religious and moral instruction in schools with special reference to present conditions in India, there was circulated among the official representatives, a memorandum by Sir Frederick Lugard, K.C.M.G., C.B., Governor of Hong Kong, on “the best methods of training character and inculcating a high moral standard in Universities founded primarily for non-Christian races without the compulsory teaching of the Christian religion,” but after a short speech by Sir Herbert Risley, K.C.I.E., C.S.I. (India Office), the matter was postponed for consideration till the next meeting of the Conference. Sir Frederick Lugard’s paper is printed in Part II. of the Report (*see* pages 237-243).

28. At the conclusion of the proceedings the following resolution was carried by acclamation :—

“(xiv) That this Conference desires to place on record its appreciation of the action of the Imperial Government in convening it and to thank the President of the Board of Education for the careful consideration which he, personally, has given to the Conference with a view to making its deliberations both pleasant and profitable.

“ The Conference also desires to acknowledge with thanks the painstaking and successful efforts made by the permanent officials of the Board of Education to facilitate the accomplishment of the purpose for which it was convened, and to express its gratitude for the hospitality which the members of the Conference have received from so many sources.”

A vote of thanks having been passed to the Chairman and the Secretary the Conference terminated.

H. FRANK HEATH, *Chairman.*

W. W. HORNELL, *Secretary.*

May 1st, 1911.

APPENDIX I.

LIST OF OFFICIAL REPRESENTATIVES NOMINATED FOR THE
IMPERIAL EDUCATION CONFERENCE.*The Dominion of Canada :—*

Ontario :—

*Hon. R. A. Pyne, M.D., Minister of Education.

*A. H. W. Colquhoun, LL.D., Deputy Minister of Education.

Quebec.—G. W. Parmelee, D.C.L., Secretary of the Department of Public Instruction.

Nova Scotia.—A. H. MacKay, LL.D., Superintendent of Education.

Prince Edward Island.—R. Magill, Ph.D., Professor of Philosophy in the University of Dalhousie.

Manitoba.—*Hon. G. R. Coldwell, Minister of Education.

Saskatchewan.—*Hon. W. F. A. Turgeon, Attorney-General.

Alberta.—A. C. Rutherford, Ex-Minister of Education and a Member of the Legislative Assembly of Alberta.

British Columbia.—A. Robinson, LL.D., Deputy - Minister of Education.

The Commonwealth of Australia :—

New South Wales.—P. Board, Under Secretary in the Department of Public Instruction and Director of Education.

South Australia.—Hon. A. A. Kirkpatrick, Agent-General in London.

Tasmania.—Hon. John McCall, Agent-General in London.

Western Australia.—C. R. P. Andrews, Inspector-General of Schools.

The Dominion of New Zealand :—

Hon. Sir William Hall-Jones, K.C.M.G., High Commissioner in London.

The Union of South Africa :—

Thomas Muir, C.M.G., LL.D., F.R.S., Superintendent-General of Education, Cape of Good Hope.

W. J. Viljoen, LL.D., Ph.D., Director of Education, Orange Free State.

India :—

Madras.—A. G. Bourne, C.I.E., D.Sc., F.R.S., Director of Public Instruction.

Bombay.—A. L. Covernton, Principal and Professor of English Literature, Elphinstone College, Bombay.

Bengal.—B. Heaton, Principal of the Sibpur Civil Engineering College.

Burma.—W. G. Wedderspoon, LL.B., Inspector of Normal Schools.

Central Provinces :—

S. C. Hill, Director of Public Instruction.

C. E. W. Jones, Principal of Morris College, Nagpur

* Did not attend.

Crown Colonies :—

- British Honduras.—The Hon. Colin Rees Davies, Attorney-General.
 Falkland Islands.—T. A. V. Best, Colonial Secretary, Magistrate, Coroner, and Auditor.
 Fiji.—J. V. Thompson, Head Master of the Native High School.
 Jamaica.—G. H. Deerr, Inspector of Schools.
 Leeward Islands.—Lieut.-Col. W. B. Davidson-Houston, Commissioner of Montserrat.
 Malta.—Professor the Hon. Enrico Magro, M.D., Director of Public Instruction and Rector of the University of Malta.
 Straits Settlements.—H. T. Clark, Principal of the Malay College, Malacca.

The Isle of Man and the Channel Islands :—

- Isle of Man.—Thomas Kneen, Clerk of the Rolls.
 Jersey.—Sir William Venables-Vernon, Bailiff.
 Guernsey.—Rev. J. U. Pilbeam, Inspector of Schools for Guernsey.

United Kingdom of Great Britain and Ireland :—

- Board of Education, England and Wales :—
 Sir Robert Morant, K.C.B., Secretary.
 A. T. Davies, Secretary of the Welsh Department.
 Owen Edwards, Chief Inspector of Schools (Welsh Department).
 H. F. Heath, Ph.D., Principal Assistant Secretary (Universities Branch) and Director of Special Inquiries and Reports.
 W. W. Hornell, Assistant Director of Special Inquiries and Reports.
 H. W. Orange, C.I.E., Chief Inspector for Elementary Schools.
 Scotch Education Department :—
 Sir John Struthers, K.C.B., Secretary.
 A. E. Scougal, LL.D., Senior Chief Inspector of Training Colleges.
 W. H. Warre Cornish.
 Board of National Education, Ireland :—
 Rev. Henry Evans, D.D., Commissioner.
 W. J. M. Starkie, LL.D., Commissioner.
 A. N. Bonaparte Wyse, Inspector.
 Department of Agriculture and Technical Instruction, Ireland :—
 George Fletcher, F.G.S., Assistant Secretary.
 Board of Intermediate Education, Ireland :—
 Rev. T. A. Finlay, Commissioner.
 His Honour Judge J. Walker Craig, K.C., Commissioner.
 W. F. Butler, Assistant Commissioner.
 Colonial Office :—
 H. W. Just, C.B., C.M.G., Secretary to the Imperial Conference.
 J. F. N. Green.
 India Office.—Sir Herbert Risley, K.C.I.E., C.S.I., Secretary Judicial and Public Department.
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APPENDIX II.

LIST of UNIVERSITIES, EDUCATIONAL ASSOCIATIONS and other PUBLIC BODIES which were invited by the BOARD OF EDUCATION to send REPRESENTATIVES to the AFTERNOON SESSIONS of the IMPERIAL EDUCATION CONFERENCE.

(a) *Universities.*

The University of Belfast.

"	"	Birmingham.
"	"	Bristol.
"	"	Cambridge.
"	"	Durham.
"	"	Edinburgh.
"	"	Glasgow.
"	"	Leeds.
"	"	Liverpool.
"	"	London.
"	"	Manchester.
"	"	Oxford.
"	"	South Wales and Monmouthshire.
"	"	Wales.

(b) *Educational Associations, &c.*

Associated Chambers of Commerce.
 Association of Assistant Masters in Secondary Schools.
 Association of Directors and Secretaries for Education.
 Association of Education Committees.
 Association of Head Mistresses.
 Association of Preparatory Schools.
 Association of School Board Clerks and Treasurers in Scotland.
 Association of Teachers in Technical Institutions.
 Association of Technical Institutions.
 Association of University Women Teachers.
 British and Foreign School Society.
 British Women's Emigration Association.
 Child Study Society.
 College of Preceptors.
 Commercial Education Committee of London Chamber of Commerce.
 County Councils' Association.
 District Messenger Company.
 Edinburgh School Board.
 Edinburgh Provincial Committee for the Training of Teachers.
 Educational Handwork Association.
 Educational Institute of Scotland.
 Federated Associations of Non-Primary Teachers.
 Geographical Association.
 Glasgow Provincial Committee for Training of Teachers.
 Glasgow School Board.
 Govan School Board.
 Head Masters Conference.
 Heywood Street Men's Club and Lads Club.
 Imperial College of Science and Technology.

Incorporated Association of Assistant Mistresses in Public Secondary Schools.

Incorporated Association of Head Masters.

Institution of Civil Engineers.

Institution of Mechanical Engineers.

Institution of Mining Engineers.

Junior Institute of Engineers.

League of the Empire.

Leith School Board.

London County Council Education Committee.

National Association of Head Teachers.

National Educational Association.

National Society.

National Union of Teachers.

Parents' National Educational Union.

Roman Catholic School Managers.

Royal Colonial Institute.

Royal Geographical Society.

St. Andrew's Provincial Committee for Training of Teachers.

Scottish School Board Association.

Secondary Schools Association.

South African Colonisation Society.

Teachers' Guild.

Teachers' Training Association.

Training College Association.

Victoria League.

Welsh County Schools Association.

Workers' Educational Association.

APPENDIX III.

MEMORANDUM ON THE EDUCATION CONFERENCES, HELD IN MAY, 1907, AND ON THE WORK SINCE DONE BY THE OFFICE OF SPECIAL INQUIRIES AND REPORTS OF THE BOARD OF EDUCATION IN ACCORDANCE WITH PROMISES MADE TO REPRESENTATIVES OF INDIAN AND COLONIAL EDUCATION DEPARTMENTS.

1. The transactions of the Conference of Representatives of Education Departments throughout His Majesty's Dominions, convened by the League of the Empire, which took place from May 24th to June 1st, 1907, and at which official representatives of the English Board of Education and the Scotch Education Department were present, were printed in the form of a confidential *précis* and circulated among the Governments concerned. In addition to this *précis*, a brief statement, showing the resolutions which were adopted, was officially sent to the Press on June 3rd, 1907.

2. The business transacted at these meetings is also fully set forth on pages 22 and 23 of the Annual Report of the Board of Education* for the year 1906-7. The subjects of discussion were:—

(a) The mutual recognition of teachers' certificates.

(b) The interchange of teachers and inspectors between the different parts of the Empire.

* The extracts from the Annual Report of the Board of Education for the year 1906-7 which are here referred to are printed in Appendix IV. to this part of the Report (see pages 29-32).

- (c) The possibility of closer uniformity of curricula, nomenclature and statistical methods.
- (d) The best methods of establishing closer relations and more effective and continuous exchange of information between the several Education Departments throughout His Majesty's Dominions.

A resolution was also passed agreeing that a permanent Central Bureau of Educational Information was important.

3. On May 27th and May 28th, private conferences were held between the Board of Education, the Scotch Education Department and the representatives of the various Education Departments of India, the Self-governing Colonies and the Crown Colonies, who had come to England to attend the Conference convened by the League of the Empire. These conferences were convened by the Board of Education and the Scotch Education Department, acting jointly, and the Colonial Office and the India Office were represented at them.

4. On pages 24 and 25 of the Annual Report* for the same year a summary of the business transacted at the private conferences held at the Board on May 27th and 28th is given. Each of these conferences opened with an explanation by the Secretary of the Board, who took the chair, of the relations which already existed between the Board of Education on the one hand and the Education Departments of India and the Colonies on the other. In this statement the circulation of the Board's blue books to the Colonies, the work done by the Director of Special Inquiries and Reports for the Indian Government and the Provincial Governments of India, the selection of books by the Board for educational libraries abroad, the selection of candidates for educational appointments in India and the Colonies, the loan of Inspectors to Colonial Governments, and the rendering accessible to Colonial teachers of the scheme for the mutual exchange of teachers between England, France, and Prussia, were reviewed.

5. At the Conference with representatives of Self-governing Colonies, Mr. Struthers, Secretary of the Scotch Education Department, also made a statement of the work which the Scotch Education Department was doing and was prepared to do.

6. The chief points discussed at the meeting with representatives of India and of the Self-governing Colonies were the following:—

- (a) The distribution in greater numbers of the publications of the Board and the Scotch Education Department.
- (b) The periodical circulation of lists of accessions to the Board of Education Library in Whitehall.
- (c) The purchase of books, as they appear, for other Education Departments.
- (d) The mutual exchange of publications between the several parts of His Majesty's Dominions.
- (e) The collection of information, by circulars or otherwise, with a view to rendering the exchange of intelligence and ideas more satisfactory.
- (f) Schemes for arriving at more uniform statistical terms and methods.
- (g) The gratuitous selection of candidates for Indian and Colonial educational appointments, with the co-operation, when desired, of the representatives of the Government or Office concerned.

* The extracts from the Annual Report of the Board of Education for the year 1906-7 which are here referred to are printed in Appendix IV. to this part of the Report (*see* pages 29-32).

- (h) The furnishing of confidential reports by the Education Departments of the various parts of His Majesty's Dominions on candidates seeking employment in other parts.
- (i) The action of the Office of Special Inquiries and Reports as "Consul" for Colonial education officials and teachers coming to England to study methods, to see schools, &c. in England and Scotland, or on the Continent.
- (j) Occasional loan of Inspectors by the Board and the Scotch Education Department to Colonial Governments.

7. At the meeting with Crown Colony representatives, the chief topics of discussion were :—

- (a) The exchange of publications between the two Home Departments and the Colonies, and between the Colonies themselves.
- (b) The proposal for the incorporation of the transactions of the meeting in a circular to be sent out, explaining what it was proposed to do.
- (c) Preparation of a list of Education Departments and Education Officials.
- (d) Circulation of lists of accessions to the Board of Education Library in Whitehall.
- (e) Purchase of Libraries and selection of books for Colonial Education Departments by the Office of Special Inquiries and Reports.
- (f) The issue of a catalogue of the books in the Board of Education Inspectors' Library.
- (g) The supply of information to Colonies, and the exchange of intelligence.
- (h) The gratuitous selection of candidates for educational appointments in the Colonies.
- (i) The supplying of confidential reports on teachers seeking employment in the Colonies, and the supplying by the Colonies of fuller particulars as to conditions when vacancies are referred to this country to be filled.
- (j) The exchange of officials and teachers, and the practicability of establishing a Gazette in which opportunities for such exchanges would be announced; such a Gazette to advertise what persons desire transfers from one Colony to another; in connection with this subject the question of periodical inspection of the educational systems of Crown Colonies by skilled men from home, and the loan or exchange of inspectors, were discussed.
- (k) Informal direct correspondence between the Office of Special Inquiries and Reports and the Colonies.

8. At the official conferences the resolutions leading up to the proposal for the forthcoming Conference in 1911 were passed. They were the following :—

- (i) That a quadrennial Conference is desirable.
- (ii) That the representatives sent to the Conference should be selected by the Governments.
- (iii) That it is desirable that the first of such Conferences should be convened by the Imperial Government.

In view of this, the Board announced that His Majesty's Government considered it desirable to arrange for an official Education Conference to

be held in the year 1911, and that intimations to that effect would be sent out in due course.

9. In December, 1908, the Board of Education, as a preliminary to this Conference, circulated to all the Colonies and Dependencies of His Majesty's Dominions, a Memorandum setting forth the work which the Office of Special Inquiries and Reports, acting on behalf of the Board of Education and the Scotch Education Department, was doing, and what it was further prepared to do in fulfilment of the pledges given by the Board of Education at the private Conferences with educational representatives above referred to. This Memorandum, which was transmitted through the Colonial Office to the Crown Colonies, and through the several Agents-General and High Commissioners to the Self-governing Colonies, was accompanied by a draft Questionnaire which the Colonial Education Departments were asked to amend with a view to its being corrected and circulated for the purpose of obtaining the information necessary to form the nucleus of a survey of the present educational systems in His Majesty's Dominions. Correspondence on the same subject has passed between the Director of Special Inquiries and Reports and the Director-General of Education in India. In the case of the Self-governing Dominions, with a view to ascertaining how far it would be expedient to discuss at the forthcoming Conference the possibility of a temporary or permanent mutual recognition of teachers' qualifications for the purpose of facilitating exchange, a schedule setting forth the conditions under which certificates are awarded in each such Colony, was circulated for correction along with the Memorandum and Questionnaire above referred to. In every case the Memorandum and Schedules were accompanied by a covering letter explaining the action that had been and was being taken, and expressing the Board's readiness to render the services of the Office of Special Inquiries and Reports more accessible to Colonial Education Departments which desired it. Since then, in the intervals of other work, the Office of Special Inquiries and Reports has been preparing a series of short Memoranda on Educational Administration and Finance in the self-governing Dominions. The Memoranda for 19 out of the 21 Colonies, States, and Provinces falling under this category have been completed and sent out as rough drafts for correction. Nearly all the Crown Colonies and Protectorates have now returned the draft Questionnaire, while 13 of the 21 Self-governing Colonies, States, and Provinces have returned the Questionnaire and the Schedule relating to teachers' certificates. Of the 19 Education Departments which have received the Memorandum on Educational Administration and Finance, 14 have already returned it duly corrected.

10. With regard to the other services which the Office of Special Inquiries and Reports undertook to render, it may be noted that since early in 1909, all the Board's publications which are likely to be of interest to them, that is to say, publications other than lists of schools or circulars of purely local administrative interest, have been sent in triplicate to the Colonies. A similar distribution has been made by the Scotch Education Department, but in future the Office of Special Inquiries and Reports will distribute the papers and publications of both Departments. In addition to this, a distribution of the more interesting circulars issued by the Board in recent years, such as those on the teaching of particular subjects in secondary schools, has also been made.

11. In the same way quarterly lists of the accessions to the Board of Education Library have been sent to the Colonies.

12. Twenty-eight* Reports have been made, or letters of advice written, at the request of the Colonial Office, the India Office, or the Governments or Education Departments concerned, by the Office of Special Inquiries and Reports on educational questions in India and the Colonies, and a number of letters or memoranda have been sent by the Director to the Government of India in his capacity of Education Correspondent to that Government. Similarly, in 1908, information on the question of rate allocation for denominational school purposes was supplied by the Education Departments of Ontario, Quebec, and Saskatchewan to the Office of Special Inquiries and Reports for the information of the Imperial Parliament.

13. Between 1st June, 1906, and the date of this Memorandum, 101 educational appointments in India and the Colonies have been referred to the two Departments, and during the same period 95 candidates have been recommended to the Offices or Governments concerned with such appointments.† The Office of Special Inquiries and Reports is responsible for this work, and makes the selections with the help of a Committee, on which both Departments are represented.

14. The present number of applicants for employment in India and the Colonies on the books of the Office is about 5,000,‡ of whom nearly two-thirds are women. Since 1st June, 1906, about 450§ candidates have been interviewed for particular vacancies referred to the two Departments.

15. Since the Conference in 1907, 227 confidential reports|| upon the careers and qualifications of teachers seeking employment in other parts of His Majesty's Dominions have been supplied to the Education Departments concerned.

16. As a result of negotiations with the Education Departments of New South Wales and Quebec, with a view to extending the provisions of the Convention for placing British teachers in French and Prussian schools, to Colonial teachers, one male teacher from Sydney and one female teacher from Quebec have already been placed in schools in France for the year 1909-10.¶

17. In 1908, the Board and the Scotch Education Department decided that Colonial teachers with suitable qualifications might be given temporary recognition under the respective regulations of the two Departments, to allow them to acquire experience of our methods, to bring new ideas into our schools, and to pave the way for reciprocal advantages for our teachers.

18. Since the 1907 Conference, 40** Colonial and Indian teachers have been furnished with introductions to schools and institutions in

* The total number at the date of the Imperial Education Conference, 1911, was 33.

† Between the meeting of the Federal Conference on Education in 1907, and the Imperial Education Conference in 1911, 125 educational appointments in India and the Colonies have been dealt with, 72 in India, 41 in the Crown Colonies, and 12 in the Self-governing Dominions.

‡ In this connection reference should be made to paragraph 14 of Appendix V. (p. 37), in which the number of applicants on the Board's List, for educational appointments in the Overseas Dominions and India is stated to be 1,400 (viz., 1,130 men and 270 women). The decrease in the number of candidates on the list since this memorandum was written is due to the elimination of applicants who on account of age, or for other reasons, were found to be no longer eligible.

§ Since the date of this memorandum 185 additional candidates have been interviewed.

|| The total number of confidential reports supplied to Overseas Education Departments between the Federal Conference on Education in 1907 and the Imperial Education Conference in 1911 was 642.

¶ Appointments have been secured in schools in France for two teachers from Sydney (viz., one male and one female) for the year 1910-11.

** These figures at the date of the Imperial Education Conference, 1911, were respectively 67 and 12.

England and Scotland, and 10* have been provided, through the Foreign Office, with permits to visit schools on the Continent.

19. In addition to the above services, educational exhibits have been collected by the Office of Special Inquiries and Reports for the Governments of Madras and Mysore, and it has recently been approached as to the possibility of arranging for a similar exhibit for the forthcoming United Provinces Exhibition at Allahabad, and this matter is now receiving consideration.†

20. Arrangements have been made this year, at the request of the Victoria Education Department, for the despatch of a part of the National Competition Exhibition to Melbourne (possibly to be exhibited in other State capitals also), with a view to enabling Australian teachers to see the kind of work which is being done in English Schools of Art.

H. FRANK HEATH.

26 February, 1910.

APPENDIX IV.

EXTRACTS FROM ANNUAL REPORT OF BOARD OF EDUCATION FOR YEAR 1906-7.

Following upon the Colonial Conference held from April 15th to May 14th, 1907—an occasion which rendered the plan feasible—a Conference on Education in which representatives of Education departments and Educational institutions in nearly all parts of Your Majesty's Dominions took part, was invited by the League of the Empire to meet in May.

The morning meetings were devoted to discussions in full session, the afternoons to the meetings of three Committees which dealt respectively with (a) problems affecting parts of the Empire in which there are large English-speaking populations, (b) problems affecting English-speaking populations in remote portions of the Empire and (c) the bi-lingual problem, both languages being European.

The morning transactions related to the following subjects :—

- (1) The mutual recognition of Teachers' Certificates. In this connection the Conference were asked to consider "whether, in order to facilitate interchange of Teachers, practical steps could now be taken to promote a larger degree of mutual recognition of the Teachers' Certificates issued by different educational bodies in various parts of the Empire; and whether, in the case of individual Teachers, more might be done by the Education Departments concerned to sanction provisional recognition of one another's certificates for short specified terms, the renewal of such recognition to be contingent on favourable reports being received from Inspectors who have observed the teacher's work." A full discussion took place and after a considerable interchange of information as to the manner in which certificates in the various countries were awarded and their value equated, the Conference came to the conclusion that the variety of local

* These figures at the date of the Imperial Education Conference, 1911, were respectively 67 and 12.

† Since this memorandum was written the exhibit for the Allahabad Exhibition has been collected and despatched.

conditions, especially in regard to such matters as the tenure of Teachers, their method of appointment, and promotion and similar points, made it impossible to arrive as yet at any complete system of mutual recognition of the Teachers' Certificates issued by different educational bodies in various parts of the Empire.

- (2) How far interchange of Teachers and Inspectors between different parts of the Empire would be feasible, (i) for a short visit, or (ii) for a term of years.

In this connection it was resolved, "That the Conference considers it desirable that financial and administrative arrangements should be made for enabling Teachers and Inspectors of Schools to acquire professional knowledge and experience in parts of His Majesty's dominions other than their own."

- "(3) The possibility of closer uniformity of curricula, nomenclature, and methods of presenting official educational statistics." On the first part of this subject it was resolved, "That, in the opinion of this Conference, it is not desirable or necessary to take any steps to bring about uniformity of curricula or text-books for the different school systems of His Majesty's Dominions." On the second part it appeared that, in view of the great variety of conditions prevailing, what was needed was not so much a greater degree of uniformity in presenting statistics, as a clearer understanding of what is connoted by the terms used and the definitions employed, and it was resolved that, "It is desirable that the different Education Departments of His Majesty's dominions should define, year by year, with precision, the terms used in the regulations and statistics that they publish and the basis upon which their published statistics are prepared."

The next three sittings were devoted to a careful investigation into the various ways in which the interests of education in the different parts of the Empire could best be furthered by encouraging closer relations and a more effective and continuous exchange of information between the several Education Departments. It was felt that the actual meeting together in conference of persons engaged in the administration of Education for the purpose of personal interchange of information and ideas was of the highest possible value; but that there were also great advantages to be derived from having a permanent machinery for collecting and disseminating year by year information on various subjects in regard to the condition, development, and progress of Education in the different parts of the Empire. The following resolution was agreed to:—"That the delegates desire to express their appreciation of the value of this Conference to the work of the Education Departments throughout the Empire, and resolve—

- "(i) That a quadrennial conference is desirable; (ii) that the representatives sent to the Conference should be selected by the Governments; and (iii) that it is desirable that the first of such Conferences should be convened by the Imperial Government."

On this the Board of Education announced that in view of this united expression of opinion by educational representatives from so many portions of Your Majesty's Dominions beyond the Seas your Majesty's Government considered it desirable to arrange for an official Education

Conference to be held in London in the year 1911 ; and an intimation of this decision is being circulated by the Secretaries of State for the Colonies and for India.

It was also resolved, that "The Conference is unanimously agreed as "to the importance of a permanent central bureau of educational "information." The Board consequently took advantage of the presence in London of so many official representatives of the Education Departments in India, the Self-governing Dominions and the Crown Colonies to hold two private Conferences with them at the offices of the Board. At these meetings representatives of the India Office, the Colonial Office and the Scotch Education Department were also present. As the result of the discussions that then took place the Board undertook to circulate their reports and documents in larger numbers to the Education Departments of India and the Colonies ; to collect and circulate at regular intervals information as to the qualifications required for teachers and the conditions of promotion in different parts of Your Majesty's Dominions ; to circulate a quarterly list of accessions to the Board of Education Library ; with the approval of the India and Colonial Offices to place the Director of Special Inquiries and Reports in direct communication with the Education Departments of India and the Colonies ; to assist the Indian and Colonial Governments by selecting teachers for them in the future without charge and to make confidential reports to the Governments concerned, as far as may be possible, on the character and qualifications of English teachers seeking employment in India or one of the Colonies ; and to do their best to make the scheme for placing English teachers in French and German schools available for British subjects with suitable qualifications from the Colonies.

The Board also signified their willingness that the Office of Special Inquiries should act as the agents of Colonial or Indian Governments in the selection and despatch of new books on educational subjects where this was desired. They have already since the Conference been able to assist the Government of Alberta in this way.

The Board undertook, moreover, to place the services of the Office of Special Inquiries at the disposal of officials coming to this country to study Education and they are indeed desirous of doing all in their power to make the knowledge and information upon educational matters that may be in their possession so far as possible available for the use of all the Governments of Your Majesty's Dominions and as a first outcome the Board were glad to arrange through the Office of Special Inquiries an interesting educational exhibit in connection with an Exhibition held in Madras last summer. The exhibit, which was particularly strong in examples of Nature-study and Manual work, could not have been brought together without the generous help of the London, Surrey, Northants, Berkshire and Liverpool Local Education Authorities, and of many individual schools and persons who lent, and in some cases made a present of, the objects to the Madras Government. The Board desire to take this opportunity of recording their thanks to all those who co-operated with them in making the exhibit a success. It was greatly appreciated, the Board are glad to learn, by the Madras Department of Public Instruction.

The whole question of developing this interchange of information and ideas is now receiving the Board's most careful and anxious consideration. In giving the undertakings referred to above the Board were greatly assisted by the hearty co-operation of the Scotch Education Department, who promised their cordial help in all these directions. The Indian and

Colonial representatives, on their side, willingly undertook to facilitate the exchange of information for the benefit of all, and promised to do their best to keep the Office of Special Inquiries and Reports regularly informed of the progress of Education in their own countries.

APPENDIX V.

MEMORANDUM FOR THE INFORMATION OF THE IMPERIAL EDUCATION CONFERENCE ON THE RECOMMENDATION OF CANDIDATES FOR EDUCATIONAL APPOINTMENTS IN HIS MAJESTY'S OVERSEAS DOMINIONS, INCLUDING INDIA.

1. *Women Teachers for Refugee Camps.*—The first occasion on which the Board of Education were asked to recommend teachers for appointments in the Overseas Dominions of the Crown was in the latter part of 1901. On the 24th September of that year the Board were informed by the Secretary of State for the Colonies that a hundred women teachers were required for the Refugee camps which had just been established in the Transvaal and the Orange River Colony, and were invited to recommend candidates for these appointments. It was subsequently arranged that sixty-seven only of these appointments should be filled on the recommendation of the Board, the remaining thirty-three vacancies being assigned to the Scotch Education Department. During the next few years a very large number of vacancies in these two colonies was referred to the Board of Education.

2. *The first West African Appointment.*—On the 5th January 1905 the Board were asked to recommend a suitable candidate for appointment as head mistress of the Government Girls' School at Accra, in the Gold Coast Colony, this being the first occasion on which their assistance was invited for an appointment in a Crown Colony other than the Transvaal or the Orange River Colony. In the years which have intervened the Board have recommended candidates for educational appointments in Crown Colonies in all parts of the Empire.

3. *The Method of Selection.*—The duty of carrying out the necessary arrangements for the selection of teachers asked for in the letter of the Colonial Office of the 24th September 1901, was entrusted by the Board of Education to their Director of Special Inquiries and Reports, and with the exception of a short interval from the 21st May 1903 to the 19th November 1904, when one of His Majesty's Inspectors of Schools was in charge of it, the work undertaken by the Board in connection with overseas educational appointments has ever since remained in the hands of that officer.

4. *The Use of Advertisement.*—The vacancies on the first occasion were made known through the medium of advertisements in London and provincial papers, and a copy of the announcement which had appeared in the Press was sent to the clerks of the London and chief provincial School Boards, and to various educational societies and institutions which were likely to know of suitable candidates. From a scrutiny of the papers of applicants a selection was made, and those who appeared best qualified were interviewed by a Selection Committee, which, in addition to sitting in London, also visited six provincial centres for the purpose. The Selection Committee consisted of the Director of Special Inquiries and Reports, one of His Majesty's Inspectors, and a lady with experience of South Africa.

5. The details of the method in which vacancies occurring since then have been made known have varied in different cases, but the general lines of the procedure adopted in this first instance have been followed ever since, except that in a few cases the Board were asked to appoint (if thought suitable) candidates who had been provisionally selected by the Colonial Authorities by means of advertisement. This latter procedure, however, was not regarded as a very satisfactory method of obtaining the best possible candidates. The essential points in the normal procedure are (i) the wide and judicious distribution of announcements making known the vacancies, and (ii) the selection of candidates for recommendation as a result of a personal interview before a Selection Committee.

6. *The growth of a list of available Candidates.*—With regard to the first point, it became usual not to advertise unless any difficulty was found, or was thought likely to be found, in obtaining candidates through other channels. The persons and institutions to whom notices were sent varied, of course, in different cases in accordance with the special requirements of the particular vacancy to be filled, but all or some of His Majesty's Inspectors were generally informed in order that they might bring the vacancies to the notice of any candidate whom they thought suitable. Furthermore, as the Board gradually collected a long list of persons seeking educational appointments abroad, it became necessary to notify any new vacancy to those on this list who were qualified for the particular post. The Selection Committee has ever since the first instance been constituted on similar lines, though the practice of interviewing candidates at provincial centres was abandoned at an early stage. The necessity of a personal interview before any candidate could be recommended has always been strictly insisted upon.

7. *The first Indian Appointment.*—The first appointment in India, for which the Board were actually asked to recommend a candidate, was a vacancy for a head mistress for the primary department of the Practising School attached to the Saidapet Training College, in the Madras Presidency. It had come to the knowledge of the Madras Government that the Board had recruited a large number of women teachers for South Africa, and possessed a list of candidates who were willing to serve abroad. They accordingly suggested to the Secretary of State for India that the selection of the candidate might be made in consultation with the Board of Education. This suggestion was adopted by the Secretary of State, and the matter was referred to the Board in December 1903. The task of selecting a candidate for recommendation to the Secretary of State was assigned by the Board to the Inspector who was at that time (as stated in paragraph 3 above) in charge of the arrangements for selecting candidates for Colonial Educational appointments. From this beginning the practice seems gradually to have grown up for the Secretary of State for India to invite the Board's assistance in recommending candidates for Indian Educational vacancies of certain special kinds, viz., those of a pedagogical or technical character.

8. *The Board's general assistance invited in making known Indian Educational Vacancies to possible Candidates.*—Previous to this, in November 1902, the India Office had approached the Board with a view to ascertaining whether the Board would be willing to assist in finding suitable candidates for Indian educational vacancies from the list of applicants for posts as junior inspectors or junior examiners under the Board, and from time to time during the following years the Board submitted to the India Office particulars of any such candidates on their

list who appeared to be suitable for posts in India. This practice appears to have been somewhat extended in 1907, when Mr. H. W. Orange, then Director-General of Education in India, approached the Board at the request of the India Office to discuss whether the Board could adopt a regular system of assisting the India Office to bring to the notice of candidates for employment under the Board the terms and conditions under which they might also apply for appointments in the Indian Educational Service. It was agreed that the India Office should send to the Board of Education a notice of every vacancy in the Indian Educational Service and keep them supplied with a stock of memoranda about the conditions of that service, and of forms of application, and that the Board of Education should send copies of these papers, at their discretion, to all likely candidates on their books, and should also let the India Office have a list of those candidates and such information about them as they possessed. In pursuance of this arrangement several lists of suitable candidates were submitted to the India Office. It was in this way that the Board of Education appear first to have become concerned with vacancies in the Indian Educational Service of a general literary and scientific character, such as inspectorships, professorships and headmasterships; and the assistance they afforded the India Office in connection with these vacancies by providing the India Office with a list of possible candidates selected from applicants for posts under the Board, must be clearly distinguished from the assistance which they concurrently rendered from time to time by recommending candidates for posts of the special kinds mentioned under paragraph 7 above.

9. *The Agreement between the Board and the Scotch Education Department.*—Of the whole number of teachers appointed by the Colonial Office for service in South Africa during and after the war, about one-third were taken on the recommendation of the Scotch Education Department, and during the same period the Colonial Office occasionally referred vacancies for which they required candidates to that Department instead of to the Board of Education. In these cases the two offices appear, as a rule, to have worked in independence one of another. Shortly after the meeting in 1907 of representatives of certain of the officers of the Overseas Education Departments and some officers of the Board, it was further decided between the Board and the Scotch Education Department that a working agreement for co-operation in these matters should be adopted. The main points of the agreement, which was ultimately signed in January 1908, were that the two Offices should mutually provide one another with particulars of all the posts in the Colonies or India for which they might be called upon to recommend candidates, and that the final selection for recommendation to the respective Secretaries of State should be made by a Committee consisting of the Director of Special Inquiries and Reports, a representative of the Scotch Education Department, any available person having knowledge of the locality in which the particular post to be filled was situated, and any other person or persons whom it might be agreed by the Board of Education and the Scotch Education Department to call in for the purpose, according to circumstances. In order to curtail, so far as possible, the travelling expenses of candidates, the Scotch Education Department arrange, if necessary, preliminary interviews in Scotland of the Scottish applicants for any particular post. The object of these interviews, which are conducted by Senior Officers of the Scotch Education Department at Edinburgh, Glasgow, or other convenient centres, is to select for subsequent interview by the Selection Committee in London the most suitable of the Scottish applicants for any particular appointment. The officer conducting the preliminary interview reports on the suitability

of each candidate to the Scotch Education Department in London, who with the papers of the candidates whom the Board of Education have decided to call up for interview in connection with the post before them, decide which, if any, of the applicants who have been interviewed in Scotland shall be brought up to London.

10. *The existing Arrangement between the Board of Education and the India Office.*—Early in 1909 the India Office approached the Board of Education with a view to making arrangements in connection with various services undertaken for them by the Board of Education, and the opportunity was then taken of regularising the procedure which had gradually grown up for selecting candidates for educational appointments in India. In March, 1910, the new procedure was definitely settled. The India Office undertook to keep the Board informed of all the vacancies in the Indian Educational Service, whether or not the Board's assistance was required in connection with them, and the duty of recommending candidates to the Secretary of State for India was formally entrusted to a Selection Committee which is made up as follows :—

- (i) The Director of Special Inquiries and Reports as Chairman, and the Assistant Director as Secretary of the Committee ;
- (ii) A permanent representative of the India Office ;
- (iii) A permanent representative of the Scotch Education Department ;
- (iv) An occasional member selected on account of his local knowledge, *e.g.*, a member of the Indian Educational or Civil Service who is on leave ; and
- (v) An occasional member or members selected by the Board of Education on account of special knowledge of the branch of education with which the particular appointment is concerned.

At the present time the India Office, as a rule, refers all vacancies in the Indian Educational Service to this Committee.

11. *The present Method of Selection followed in connection with Vacancies in the Indian Educational Service.*—At this point it is desirable to give a description in outline of the actual procedure followed in finding and recommending candidates. As soon as the vacancy is referred to the Committee by the India Office the preliminary steps are taken by the Office of Special Inquiries and Reports. First an announcement is drawn up giving such particulars of the post to be filled as are likely to be useful to intending candidates, *e.g.*, the salary and duties attached to the post, the nature of the institution for which the officer is required, and some description of the place or locality in which his work will lie.* When this announcement has been approved by the India Office, steps are taken to make it public. The persons and institutions to whom copies are sent vary in individual cases, according to the nature of the post to be filled and the qualifications which candidates are required to possess. According to these circumstances, the list includes the Inspectors of the Board of Education ; professors in the various Universities of

* The Board of Education have now drawn up in consultation with the India Office a general statement of the conditions and prospects of the Indian Educational Service. Consequently any person now applying for information with reference to educational appointments in India will be supplied with one of the general statements above mentioned and invited to fill in an application form. The filling-in of this application form, which is applicable to all educational vacancies in His Majesty's Overseas Dominions with which the Board are or may be concerned, and not merely those in India, will place the applicant on the Board's general list of candidates for educational appointments abroad in the Overseas Dominions, and particulars of any such posts subsequently referred to the Board for which he or she may appear to be qualified will be communicated to him or her.

England, Wales, and Ireland; the "Appointments" Associations or Boards of various Universities, or (where there is no such Association) the Registrar of the University, or some similar official; the head masters or head mistresses of secondary schools; the principals of training colleges; and any institutions or associations which are likely to be able to bring the vacancy to the notice of suitable candidates. If the qualifications required for the post are of an unusual character, or there is likely for any other reason to be difficulty in finding candidates, the vacancy is advertised in some of the leading educational and daily papers. At the same time the papers of candidates who have already filed applications are carefully examined and particulars are sent to those candidates who appear to possess the necessary qualifications. The distribution of announcements in Scotland is undertaken by the Scotch Education Department, which is provided by the Office of S.I.R. with copies for this purpose. As soon as a reasonable time for the admission of applications has elapsed—the latest date for the acceptance of applications is, as a rule, specified in the announcement of the vacancy—the Director of Special Inquiries and Reports, in consultation with the other permanent members of the Committee, arranges the exact constitution of the Committee which is to deal with the vacancy in question and the date on which the interview of candidates shall be held. The date of the interview is then communicated to the Scotch Education Department, so that the preliminary interview referred to in paragraph 9 above may be arranged, if required. A careful scrutiny is then made of the papers of all the candidates who have applied to the Board for the post, and those who appear on paper to be the most suitable are invited to come before the Selection Committee for an interview, at which there appear also the candidates whom the Scotch Education Department have selected for consideration in connection with the vacancy in question. If none of the candidates interviewed is considered suitable, the Committee decide whether other applicants should be called up for interview, or what further steps should be taken for the purpose of securing more satisfactory candidates. When the Committee have eventually discovered a candidate whom they consider suitable, a letter signed by the Chairman is sent to the India Office, recommending the candidate for the post, and enclosing copies of his form of application, testimonials, and other recommendations, and a summary of the Committee's estimate of the candidate's suitability for the appointment. It is then for the Secretary of State for India to appoint the candidate if he is satisfied that he is suitable for the post.

12. *Educational Appointments in the Crown Colonies.*—No formal arrangement has been entered into with the Colonial Office as regards the methods to be adopted in the selection of candidates for those educational appointments in the Crown Colonies which are referred to the Board by the Secretary of State for the Colonies or the Crown Agents for the Colonies, but the methods followed are, as a fact, on the same lines as those which have been adopted in the case of Indian appointments. The Selection Committee is constituted in a similar way, with the exception that there is no permanent representative of the Colonial Office upon it.

13. *Educational Appointments in the Self-governing Dominions.*—The Board of Education have also occasionally been invited to recommend candidates for educational appointments in the States or Provinces of the Self-governing Dominions. In these cases the Board of Education have placed at the disposal of the Representative in London who is concerned the services of their Director of Special Inquiries and

Reports. In some cases several names of apparently suitable candidates from the Board's list have been sent forward for consideration by the Representatives of the Overseas Governments, while in others a similar procedure has been adopted to that which is followed in dealing with the educational appointments to which reference is made in paragraph 9 above, except that wherever possible the Representative in London of the Overseas Government concerned has been asked to become a member of the Selection Committee at which the selected candidates are interviewed.

14. The Board have now a list of 1,400 candidates (1,130 men and 270 women) who are willing to consider educational appointments in the Overseas Dominions including India. A corresponding list is kept by the Scotch Education Department, which contains at present the names of 208 men and 79 women. Much importance need not, however, be attached to these numbers, since it is found that many candidates,—and these not the least eligible,—are willing to come forward on hearing of a particular vacancy, who had not previously made up their minds to seek employment overseas. Speaking generally, there is no dearth of persons willing to accept educational appointments in the Overseas Dominions, provided that the appointments appear to offer some reasonable prospect of advancement. There is, however, a decided reluctance to undertake service on the West Coast of Africa, where a considerable demand for English teachers exists. Moreover, the existence in connection with commerce and industry of openings for men with scientific qualifications has rendered it increasingly difficult to recruit scientific men for educational work in this country, and this difficulty has naturally been felt severely in recruiting men for those educational posts in the Overseas Dominions and India for which scientific qualifications are required. Finally, as regards India, there are not wanting signs that the young men of the present day are not as anxious as were those of a previous generation to make that Dependency the scene of their lives, work. The result, so far as the matter dealt with in this Memorandum is concerned, is that the best qualified of those who intend to devote themselves to educational work are not as a rule willing to take up service in the Educational Department of India, so long as there are reasonable prospects of a career elsewhere. This tendency makes it increasingly difficult to meet the growing demands of the Government of India for young men with the highest academical qualifications, particularly when in addition teaching experience in this country is required. A further difficulty is caused by the demand sometimes made for teachers who have gone through a course of training for secondary schools. There is no difficulty in finding teachers trained for elementary schools, but the training of teachers for secondary schools is still in an experimental stage in this country, and for the most part men with high academic qualifications rely upon these for obtaining their first appointments, while men who for one reason or another have failed to obtain good degrees more frequently endeavour to strengthen their qualifications by undergoing a course of training for secondary schools of greater or less length. This difficulty does not apply in anything like the same degree to women who have realised the value of training much more quickly than have the men.

15. The total number of appointments dealt with in the manner described above since the meeting of the Federal Conference on Education in 1907 is 72 to India, 41 to the Crown Colonies, and 12 to the Self-Governing Dominions.

APPENDIX VI.

MEMORANDUM FOR THE INFORMATION OF THE IMPERIAL EDUCATION CONFERENCE ON THE SUGGESTION OF THE GOLDSMITHS' COLLEGE DELEGACY OF THE UNIVERSITY OF LONDON THAT THE FACILITIES AFFORDED BY GOLDSMITHS' COLLEGE FOR THE TRAINING OF TEACHERS SHOULD BE MADE KNOWN TO THE GOVERNMENTS OF THE OVERSEAS DOMINIONS.

1. On the 21st December 1910 the Goldsmiths' College Delegacy addressed the following letter to the Under Secretary of State for the Colonies :--

" I am desired by the Goldsmiths' College Delegacy of the University of London to invite your attention to the advantages offered to Students preparing for the profession of Elementary Teaching in the Training Department of this College. . . .

" Nearly all places in this Department are engaged in advance by certain County and County Borough Councils, but there are also a few places available for students 'Recognised' by the Board of Education and paying their own fees of 16*l.* annually, and for 'Private' students in respect of whom no subsidy is received from the Board of Education, and who have therefore to pay the higher fee of 29*l.* annually. Owing, however, to the impending termination of the agreement with the London County Council, who hope to be able, after 1912, to make provision in their own Colleges for all the Students whom they desire to train, the number of places engaged in advance will be reduced from July of that year onward, and the number available for fee-paying Students ('Recognised' or 'Private') will be increased. The University wish to fill as many of these places as possible, and would welcome duly qualified Colonial Students of whose character and suitability for the Teaching profession they had satisfactory evidence. It seems to them that the additional vacancies which will arise in the College in and after 1912 afford an admirable opportunity for establishing closer relations between the Colonial and Home Teaching services, a London College, under direct University control, possessing (they venture to think) some special advantages in this respect.

" As no grant is payable by the English Board of Education in respect of Colonial Students, the fee charged (whether paid by the Students themselves or by their Governments) would necessarily be the higher fee. This is at the present 29*l.* as stated above; but it would doubtless have to be raised to some extent if the number of students were much reduced. Though no grant would be payable by the Board in respect of Colonial students, such Students would receive the 'College Certificate' on satisfactorily completing their course, and arrangements could probably be made to obtain from the Board either the ordinary Government certificate, or a special form of Certificate adapted to their case.

" In the case of either men or women Students, the College Authorities would require to be satisfied that there was some responsible person in this country, to whom reference could be made in the case of need, and whose duty it would be to see that proper arrangements were made for the vacations.

" Should the Secretary of State think the matter worthy of further consideration, in connection with any of the Colonies under

his administration, the Warden of the College (Mr. William Loring, M.A.) will be happy to call at Whitehall, or to send in writing any further information which may be required. The address to which inquiries should be sent is:—The Warden, Goldsmiths' College, New Cross, S.E. Information can also be obtained from the Board of Education.

"A similar communication has been addressed to the Agents-General of the Self-governing Colonies.

I am, &c.

(Signed) EDWARD H. BUSK,
Chairman of the Goldsmiths' College Delegacy."

2. Goldsmiths' College was founded in 1891 under the name of "The Goldsmiths' Company's Technical and Recreative Institute" by the Worshipful Company of Goldsmiths, one of the twelve great livery companies of the City of London, and carried on by them until 1904, when the site, buildings and grounds were presented to the University of London. The Company promised at the same time an annual grant of 5,000*l.* for five years and this period has subsequently been extended to eight years. In addition to the annual grant, the Company have also contributed large sums towards the repair and extension of the buildings.

3. The buildings of the College, which are situated at New Cross, London, S.E., comprise a great hall capable of accommodating about 1,600 people, a dining hall, a library, gymnasium and a swimming bath as well as lecture and class rooms, laboratories, workshops, and art studios, &c., and there is also a large playground. The buildings and playground cover 6½ acres.

4. On the 23rd November 1904 the Senate of London University approved, and on the 25th March 1908 they amended a scheme for the management of the institution which was to be known in future as "University of London, Goldsmiths' College." Under this scheme the management of the college is entrusted to a delegacy termed the Goldsmiths' College Delegacy appointed annually by the Senate and consisting of eight members of the Senate, two representatives of the London County Council, one representative of each of the following bodies, the Kent, Surrey and Middlesex County Councils and the Croydon County Borough Council, two representatives of the Goldsmiths' Company, the Principal of the University, and the University Professor of Education.

5. The day training department, which was opened in September 1905, was established and is maintained with the help of a subsidy from the five County and County Borough Councils represented on the Delegacy and is at present the most conspicuous feature of the College. It is recognised by the Board of Education as a Training College under their Regulations for the Training of Teachers for Elementary Schools. It has accommodation for 515 students (men and women), of whom about 125 (women) reside in hostels and the remainder at home or in lodgings. The course extends over two years, of which the first is devoted mainly to General Education and the second mainly to Professional Instruction. The Examination for which students are, as a rule, prepared, and which takes the place of the Certificate Examination of the Board of Education, is one conducted by the University of London, but not constituting a recognised stage in the course for a Degree. It is divided into two parts, taken at the end of the First and Second Years respectively.

6. Nearly all the places in the Training Department have been engaged in advance by the Kent, London, Middlesex and Surrey County Councils and the Croydon County Borough Council, the Goldsmiths'

College Delegacy placing no general restriction on the choice of candidates for admission other than those imposed by the Regulations of the Board of Education, but reserving the right of rejecting particular candidates on medical or other grounds. The Councils award the places free of charge. A few places, not engaged by the Councils referred to, are available at a fee of 16*l.* a year. "Private" Students (in respect of whom no grant is received from the Board of Education) pay 29*l.* a year.

7. Hostels for Women Students have been established by the Kent and Surrey County Councils, and by the National Society. It is hoped that additional Hostels both for Men and for Women Students will be provided in the future both by the University itself and by the contributing Counties or County Boroughs. A list of recognised lodgings is kept for students who can neither live at home nor be accommodated in hostels. These lodgings are regularly inspected by the College Staff, and the householders are required to conform to certain regulations laid down by the College Authorities. The annual fee for a Woman Student resident in one of the above Hostels in respect of whom grant is paid by the Board, is about 10*l.* and the grant paid by the Board to the Hostel for each Woman Student is 25*l.* The fee payable by a Private Student on account of the expenses of residence in a hostel would therefore probably be about 35*l.* in the case of a Woman Student; in the case of a Man Student it might be rather more. The usual payments for lodgings and board in the case of a student not resident in a Hostel (including the mid-day dinner at College five days of the week) is 17*s.* 6*d.*, making a total of 31*s.* 10*d.* for the 36 weeks of term. In some cases a small payment is made to householders during vacation also, bringing the total to 33*l.* or 34*l.* The cost of books is between 3*l.* and 4*l.* a year.

8. The Regulations issued by the Board for the Training of Teachers for Elementary Schools contain the following provisions with respect to the admission of Private Students to recognised Training Colleges :—

"With the special approval of the Board a recognised Training College may admit a limited number of Private Students, on behalf of whom no Grants will be paid by the Board.

"If a Private Student satisfies the conditions of admission set out in Articles 13, 38, and 44 of these Regulations, and follows the courses of study and passes the tests of proficiency prescribed in the case of Recognised Students, he will be regarded by the Board as qualified by attainments for recognition as a Certificated Teacher."

(The conditions of admission set out in the Articles referred to, are the conditions as to age and qualifying examinations to which Recognised Students are ordinarily expected to conform.)

"A Private Student who does not desire recognition as a Certificated Teacher may be admitted under such conditions, and may follow such a course of study, undergo such tests of proficiency, and receive such a certificate of successful study, as may be arranged between the Board and the Authorities of the College in each case.

"In cases where Private Students are residing in or attending a Training College, the scale of fees must be so framed that the fee charged to a Recognised Student, when added to the Parliamentary Grant payable on his behalf, will not in any case produce a sum greater than the fee charged to any Private Student who occupies similar accommodation."

Students from Egypt and Malta have from time to time been admitted to recognised Training Colleges, and have received Special Certificates of successful study by arrangement between the Board and the College Authorities under the provisions referred to.

9. The Board of Education were consulted by the Colonial Office on the subject of the proposal contained in the letter quoted in the first paragraph above and the following is an extract from the Board's letter in reply :—

“The proposal of the Delegacy would seem to contemplate the admission of Private Students from outside the United Kingdom on a larger scale than has hitherto been approved by the Board in any case, and if any large number of applications were to be received the Board would have to consider the question of fixing a definite limit to the number of Private Students that might be admitted. The Board would further have to consider whether such Students could be allowed to receive the ordinary Certificate qualifying for service as a Teacher in England and Wales (as to which questions of some difficulty might arise) or whether such students should be allowed to receive a Special Certificate, and if so, under what conditions. Subject to a consideration of these points, the Board see no reason why such a scheme as that described in the letter from the Delegacy might not be brought into effect.”

10. The Board went on to suggest that the proposal, and especially the question as to the certificates to be awarded, might conveniently be discussed at the Imperial Education Conference,—a suggestion in which the Secretary of State for the Colonies concurred.

REPORT OF THE IMPERIAL EDUCATION CONFERENCE, 1911.

PART II.

SPEECH BY THE PRESIDENT OF THE BOARD OF EDUCATION, OPENING THE AFTERNOON SESSIONS OF THE CONFERENCE.

Ladies and Gentlemen, the session of the Imperial Education Conference, which we are holding here this afternoon, is of a different nature from the sittings which are taking place in the morning, but in both cases the Conference has sprung directly out of the requests which originated at gatherings in 1907, when the Imperial Government was asked, I believe for the first time, to summon an Imperial Conference to deal purely with educational affairs. Since 1907 the Special Inquiry Branch of the Board of Education has devoted itself assiduously to some of the tasks which were then defined. On the present occasion there are assembled in this room, as there were this morning in the Conference Room of the Board of Education, delegates from the Dominions, from the Crown Colonies, from India, from the Isle of Man, the Channel Islands, and Malta. These morning conferences are devoted largely to administrative questions. The afternoon conferences will be devoted entirely to what may be called educational questions proper. May I state that the arrangements which have been made about the Press are as follows. The Conference has decided that at their morning sittings they should conduct their discussions in private, but that at the end of the Conference they will themselves agree upon the reports which are to be issued officially and to the Press.

At the afternoon sessions, however, there will be, as you will already see, a full representation of the Press, or as full as this room will permit. The space for sitting here is limited, and I have found it necessary to restrict the number of invitations which are given, purely because of the size of this room, and the whole of the seats which are in this room have been allocated to associations, learned societies, and other institutions which are directly concerned in education in the United Kingdom.

Let me point out that the papers which are being read in the afternoon here are written entirely by educators of

the United Kingdom. I should gladly have obtained papers from the delegates from overseas, but time and distance made it almost impossible to arrange this, and, therefore, the papers which will be read this afternoon, and on Wednesday, Thursday, and Friday, have been written by Englishmen, and Scotsmen, and I believe Irishmen too, of well-known reputation in the United Kingdom. But I would point out that this is intended to interfere in no way, and I hope it will in no way interfere, with the widest discussion possible, especially by the delegates who have come from overseas.

We are assembled here in order that we may know what their views are, in order that we may have a frank exchange as between the representatives of the United Kingdom and the representatives of the Dominions overseas and the Colonies; a frank exchange of views and opinions on all the subjects which crop up.

I have therefore decided, in order to give the delegates a full chance of expressing their views and giving its true imperial value to this Conference, that in the discussions which follow the papers, precedence shall in every case be given to the delegates from abroad. I do not wish for a moment, of course, to exclude any lady or gentleman in this room who represents an institution in the United Kingdom, but I wish the preference to be given—and I am sure the Conference will agree with me—to the delegates who have come from overseas.

Well, ladies and gentlemen, allow me to describe very briefly some of the administrative work of an imperial bureau character which has been done during the last four years since the informal Conference met.

I said that the Department of Special Inquiries and Reports of the Board of Education had undertaken some of the duties which were then defined, and I would point out first of all that in order to fulfil these duties satisfactorily, the Director of Special Inquiries and Reports has been put into direct communication with the Dominions, with India, and with the Colonies, and we are hoping still further to eliminate part of the procedure which occasionally leads to loss of time.

The reports and documents of the Board of Education and of the Imperial Offices in the Dominions and the Colonies are circulated now much more freely than they were before, and memoranda on educational organisation in the Self-Governing Dominions have been compiled

during the past four years, and will shortly be issued for the use not only of the delegates and the departments, but for the general public as well.

Besides that, the Department of Special Inquiries has done much to collect and circulate information with regard to teachers' qualifications in the Dominions. Reports have been given on a very large number of teachers, and assistance is given every day in the week to some of the offices like that of Alberta or the Australian offices, or offices in South Africa, which enables these offices to select teachers who have had their training and who are now resident in the United Kingdom, in order that they may serve in the schools of the Antipodes or on the other side of the Atlantic.

Then, we have also arranged, through the Department of Special Inquiries, that the privileges that are now given to teachers in the United Kingdom in French and German schools should be extended to teachers in the Dominions, and already some teachers have taken advantage of the privileges which are given to us by the French and German Governments to occupy places in their schools for the purpose of obtaining French and German experience.

Then, the Director and Assistant Director have been constantly giving assistance to the officials who arrive here sometimes in organised bodies as on the present occasion and sometimes one by one, and I hope they have succeeded in making their services of use to the administrators who have come here from time to time.

And last of all there has grown up a library of considerable dimensions covering a very much wider area than it ever did before, containing contributions which have been accumulated all over the world, and which are now carefully organised, tabulated, selected, and we have even gone so far as to indicate, as well as we can by the method of classification, not only what our library contains, but what it does not contain.

All this I know is only the bones of organisation, but I would point out that we are attempting, as far as we can, to deal not only with the bones of organisation, but with the whole being which must of necessity come within the range of our educational interests, and the Government have been animated, not merely by a sense of kinship and of imperial feeling, but also by a recognition and realisation of the fact that the problems that

have to be faced here and that have to be faced overseas are all very much of the same nature. We have to deal in the United Kingdom with the difficulties of the supply and the training of teachers, and so has indeed every educational department everywhere. The same problems crop up with regard to expenditure in every part of the world—for example, how far freedom of administration can be attained with the necessary control of public finance. Problems of local organisation and autonomy, although different in every Dominion and every Colony, are somewhat of the same nature all the Empire over. Religious difficulties which we know here have been dealt with or have not been dealt with abroad, but they exist there just as they exist here. All the subjects of pedagogy—a most disagreeable word—are of imperial as well as of national interest. The varieties in the classification of schools which we find great difficulty in dealing with in the United Kingdom, have also puzzled the brains of the administrators in the Dominions. The great problem of technical education, which in Canada is now being faced with great enterprise, has to be faced here and elsewhere. The rural and urban difficulties which surround us here are of great moment in Dominions like Australia, and the methods of dealing with all of these problems must of necessity be of value to us, as I hope our experience may be of value to them.

The United Kingdom in many things, for instance, may learn from Canada, Canada may learn from Australia, Australia may learn from South Africa. The oldest may learn from the youngest; I hope the youngest will be able to learn from the oldest. We wish to bring into the common stock the intellectual forces of the whole Empire, and, ladies and gentlemen, I would point out that in that, we are really at the very root of imperial strength. It is a commonplace to say that our imperial strength is to be found in men. Well, the educator is producing men. The intelligence and the character of the Briton all over the world depends in the first place on the training he has received in his schools, on the personal influence that the teachers are able to exert, and the organisation which enables the teacher to exert his personal influence to the best advantage; and I need hardly say that just as the main unity of our Empire depends on affection and interest and sentiment, so its strength depends on the intelligence which we can breed in our educational institutions.

This Conference is intended not mainly to foster the imperial sentiment, but to give practical effect to that imperial sentiment by bringing together the knowledge and experience of different parts of the British Empire. It is true that many of the problems by which we are faced appear to outsiders and to amateurs to be simple problems; but I would point out that, although simple to the amateur, they are really complex, that, although apparently easy, they are extremely difficult to those who have to deal with them; and we can show, and we are showing, I hope, in this Conference, that the Empire is a practical working concern and is not merely a sentimental vision.

We are met to discuss practical questions which are none the less urgent, and I believe that we shall do so with efficiency by taking advantage of the knowledge and experience of those who have dealt with them in different ways in different parts of the world. The contrast between the atmosphere in which the Colonial or Dominion representative and the United Kingdom administrator has to deal with these many problems is marked in almost every department of education. Fortunately for those who are in the newer countries they have to break fresh ground. They are untrammelled by tradition; they can write on the page whatever they please. There may be some loss in that, but there is certainly much to be gained, whereas we in the United Kingdom often have much to clear away, and tradition, which gives us much of our strength, frequently hampers us in our administrative operations. We have in the United Kingdom a precedent for almost everything, and at times I must confess, as the Head of the Education Department, I envy those in other parts of the world who are not hampered by precedent, and may do almost entirely what they please without considering the past.

Well, in London here assembled we are bringing face to face those who have made many experiments some of which may have failed, and some succeeded; and in this Conference we have the distinct advantage of not only exchanging opinions which might well be done on paper, or by communication of one kind or another, but of seeing the representatives of those great administrative bodies face to face.

The advantages of which I have spoken previously are of a technical nature, but the main justification of this Conference I take to be its personal interest. We

are not only here to discuss education, but to meet educationalists. We want to come face to face with men who are directing or actually using the methods which they are describing or have described for our benefit. I, therefore, in the name of His Majesty's Government, extend to the whole of the delegates from beyond the seas, and those who come from nearer home, the very heartiest welcome to the centre of the Empire, and I trust that these discussions, and those that will take place at the morning sessions, will be of value not only to the United Kingdom, but to the Empire as a whole. (Cheers.)

EDUCATIONAL PAPERS READ AT THE AFTERNOON
SESSIONS OF THE CONFERENCE, WITH
A SUMMARY OF THE DISCUSSIONS.

Tuesday, April 25th, 1911.

On Tuesday afternoon, April 25th, papers were read by Mr. H. J. Mackinder, M.P., Reader in Geography in the University of London, on "The Teaching of Geography from an imperial point of view, and the use which could and should be made of visual instruction," and by Professor Hugh E. Egerton, M.A., Beit Professor of Colonial History in the University of Oxford, on "Some Aspects of the Teaching of Imperial History," and a discussion followed. The papers and a *résumé* of the discussion are given below.

THE TEACHING OF GEOGRAPHY FROM AN IMPERIAL
POINT OF VIEW, AND THE USE WHICH COULD AND
SHOULD BE MADE OF VISUAL INSTRUCTION.

By H. J. Mackinder.

I venture to hope that the subject which I have been asked to present to you this afternoon may have a double interest. I desire to approach you in the first place as educational experts, and to ask your attention for a special mode of teaching, and in the second place as imperial representatives, and to suggest to you that the mode in question may have peculiar value in regard to the maintenance and progress of our Empire.

The phase of imperial history upon which we have entered is concerned with the consolidation rather than the extension of the Empire, and I think it will be

agreed that in this work of consolidation the part of the teacher must be as great as that of the statesman. New conditions prevail to-day in every part of the King's Dominions. In the Mother Country and in the Self-Governing Dominions beyond the seas we have to do with a league of democracies, which are becoming equal in status, although various in power. Under such conditions a certain unity of policy, without which the Empire will exist merely in name, is to be obtained only by the free consent of the several peoples. This consent, if it is to be relied upon, must be based on a reasonable agreement in regard to aims, and sympathy in regard to difficulties. The chief enemies of such agreement and sympathy are ignorance and local prejudice. These are the devils which it is the part of the teacher to exorcise.

Nor is it only in the Self-Governing Dominions that the Empire is to-day based on consent. Are we not entitled to say, in view of the small military force which we maintain, that our position in India is now due rather to the service which we render than to the fact of conquest? Moreover, with the progress of education is it not clear that the longer the British Raj lasts the stronger will become the new sense of Indian unity? For the peace and progress of India it is therefore necessary that there should be great classes among the Indian peoples who freely consent to the endurance of our rule, because they appreciate what India has gained from British justice, what to-day she obtains from the Empire in the way of peace, and how difficult and gradual must be her advance to fitness for self-government. So it happens that here in Britain in the way of democracy, and in India in the way of education, we have now advanced so far that safety is only to be found in stepping still further forward on to the sure ground of a widespread understanding and discretion. Need I add in this connection that in using the word "Imperial" in the title of my address, I have had no thought of treating it as the equivalent of "Imperialist." My wish has been to indicate opposition on the one hand to a merely scientific, and on the other hand to a merely insular point of view. If education is to build up the Empire it must aim at supplying not merely knowledge but a motive, and that motive must spring from a wide, not a narrow, outlook.

It is necessary to my argument that with your permission I should devote a few moments to the significance

of another of the words in my title. By geography I do not intend a knowledge of place names. I do not even mean a knowledge chiefly of facts. I refer rather to a special mode and habit of thought, to a special form of visualisation which I cannot otherwise describe than as "thinking geographically." The mind has an eye as well as an ear, and it is possible to train this eye by appropriate methods to as much accuracy and readiness of thought as may be imparted by the ordinary literary methods to the mind's ear. It is, of course, true that many people visualise literature, and *see* the printed page rather than *hear* the voice of the author. Such visualisation is, I venture to say, a perversion of literature, and a waste of the visualising power. The music of language was meant to be heard. The power of visualisation was meant for real things, rich in shape and colour, not for the combinations and permutations of the letters of the alphabet. Let our literary teaching appeal to the mind's ear, and our geographical and historical teaching to the mind's eye. As Thring of Uppingham had it, "the true geographer thinks in shapes." May I add, "and the true historian in movements"?

Will you forgive me if for a moment more I dwell on this point, for it is essential to the object which I have in view. We have geographical thinking in its rudimentary form in the eye for the country which characterises the fox hunter and the soldier. But many a countryman and officer has the eye for a bit of solid country under his feet and within the circle of his horizon, without having the power of roaming at ease imaginatively over the vast surface of the globe. This is true even of many travelled men. How much more of the untravelled majority!

The real geographer prefers a map without names. He broods over it by the hour together, for it is rich in suggestion. He *sees* the world-drama as he reads his morning paper. He gesticulates unconsciously as he thinks. Within limits his wordless language has great resource, for whereas in ordinary talk we can make only one statement at a time, many thousand statements are made simultaneously in a map. The trained geographer when he considers a fact sees it on a background of kindred facts. In other words he sees it in perspective of space, just as it is characteristic of the historian that he sees each occurrence in perspective of time.

These trained powers of outlook are close kin, are they not, to what we know as judgment in the ordinary

affairs of the world? The sense of geographical and historical perspective goes far to make the statesman, whether in politics, or strategy, or commerce. I submit that the man who has once acquired the habit of geographical thinking approaches every problem of great affairs with the more surety and resourcefulness. His mind's eye sees beyond the horizon with the same accuracy and vividness with which the parochial eye sees within the horizon. He finds the same joy in the contoured map *without names* that a born and trained musician finds in the silent reading of a musical score. The index to his mental stores is geographical. He looks over his mind's map to recover a lost fact, for his habit of association is of ideas with places. To teach geography and history aright we must train the artistic eye to appreciate topographical forms, and the dramatic eye to people them afresh with past humanity. In a word, I plead for the cultivation in geography and history of that visualising power which in rudiment is natural to the child and the savage, but which tends to wither rather than to expand in the presence of the printed page and of the ribbons of landscape seen through the windows of a railway carriage.

Now, how do these ideas bear on the teaching of children? Everyone will remember the surprise with which a few years ago we realised the possibilities of what is known as brushwork for the artistic training of children. I believe that there lie similar possibilities for their general mental development in the realm of geography. The appeal to what I may describe as a concrete rather than an abstract philosophy is, in my experience, of absorbing interest to boys and girls of twelve years old. I have urged lately the possibilities of such teaching in some little books for children, and perhaps I can best and most quickly convey my idea by sketching the scheme which I have there drawn for a four years' course appropriate to children between the ages of nine and thirteen. The pupil is first incited to read, with mastery, the nameless map of the land-relief of Britain, building up mental pictures from it, and associating history with it. Then the lands immediately beyond the Channel are described in similar fashion, the essentials of European and Mediterranean history being revealed in the national contrasts of to-day. Then the outlook is broadened so as to include the world-wide stage of modern life, the climatic contrasts being pictured

in the order of their discovery. Finally, with powers prepared and strengthened in the previous stages, the pupil is asked to visualise with a single grasp our whole world of varied scene and incessant change. Almost every problem of to-day is a whole-world problem, and the power of comprehensive outlook is of the first importance for the citizens of an empire. I believe that it is possible by right geographical teaching to send forth pupils, even from the primary school, with something of what used to be known as "humane" culture in them. By training the power of visualisation I believe that we can at a relatively early age impart a sense of mental perspective which does not come by less concrete methods until later years—too late for the schooling of the majority. With the habit of distinguishing the significant from the insignificant, and with a chart in the mind upon which to enter new facts in due position, even the halfpenny newspaper may contribute to further education in after life.

At this stage I would ask you to consider two incidental points. In the first place you will have noticed that I have not hesitated to build history into my geography. If historical action is to be properly visualised it must obviously be upon a geographical stage. We frequently speak of a joint subject which we call history and geography. I believe that we should rather teach geography and history, and this not merely because the "stage directions" must necessarily precede the successive acts of a drama, but also because for the vast majority of people the present must ever be more important than the past, and should therefore stand in the foreground. Unless, perhaps, in the case of the national epic, where the burnt cakes of Alfred and the disobedient waves of Canute have what I may describe as a saga value for the maintenance of the race, I believe that history should be taught to children incidentally to the existing facts of political geography. So shall we impart the historical sense in regard to the affairs of to-day, rather than a merely romantic interest in the past. Moreover, there is a practical reason in favour of this course. In these days, when international affairs have become world wide, it is necessary that the great human contrasts which are the outcome of universal history should be generally known, and that—to take only a single category, by way of illustration—the distinction of Christian, Mohammedan, Hindu, and Buddhist should be generally realised in some degree of historical per-

spective. But within the limits of the elementary school there is not time for another subject, especially for one so vast as world-history. Even the national epic of England begins to lose its simplicity and its dramatic force in the later stages, when the stories of Ireland, Scotland, Canada, India, and France must to some extent be grafted upon it. I speak after experiment when I express my conviction that it is possible to convey the essentials not only of geography but also of universal history, by beginning our geographical teaching with the Homeland, there learning to read the geographical alphabet, and thence proceeding through the lands of the world in such order that the incidental history falls roughly into its chronological sequence. Thus I would describe the geography of Egypt first, and then in succession, let us say, Palestine, Greece, Rome, Constantinople, Mecca, Italy, the Oceanic Lands of Europe, the East Indies, the West Indies—as it were, a world-long Odyssey. In each case would be clearly visualised first the land-relief and the play of air and water upon it, then the living contrasts and the historical movements from which they have ensued. Even the national epic of Britain itself will be the more clearly and the more fruitfully realised if it is built up on a vivid mental picture of the British Isles. Let us mentally see rather than hear of the fertile lowland near the Continent, successively conquered by Roman, Saxon, and Norman, and then of the hill countries of the oceanic border still peopled by the Gael and the Briton. Within the plain of England itself let us realise the contrast of town and country, London and the Shires, for English history down to the time of the industrial revolution was essentially the story of a single city and a single countryside.

My other incidental point regards the futility, as I think it, of prescribing for a subject of teaching or examination the geography of the British Empire. "Little they know of England who only England know." Still more truly may it be said, little they know of the British Empire who only the Empire know. England is surrounded by external powers of nature and man, but the British Empire is as it were threaded through the other powers as the weft through the woof of a cloth. In the poet's phrase the shuttles of the Empire's loom are driven through the neutral spaces of the ocean. The postal route from Calais to Brindisi, essential to the efficiency of the British Empire in modern peace time, is threaded

through the Alpine tunnels. The significance of such a station as Hong Kong lies wholly in its relation to neighbouring China and to the eastern seaways. British trading communities and His Britannic Majesty's Consuls are in every land. For the practical purposes of the British citizen the Empire is an influence which pervades all lands and all the sea, though its radiating centres are in the regions coloured red on the map. The question is one of perspective. Let us first teach children to read the map and to think geographically, then let us regulate and broaden their imagination through wider and wider fields until at last they can grasp the globe in the background of a thought, and place a given detail in its world setting. The idea of a world-price for wheat may, for instance, call up in the mental background a picture of the globe bearing its grain harvests in their due positions and seasons. It is there in the mind, available for reference if necessary, and giving surety and richness of thought. But through all, let our teaching be from the British standpoint, so that finally we see the world as a theatre for British activity. This, no doubt, is to deviate from the cold and impartial ways of science. When we teach the millions, however, we are not training scientific investigators, but the practical striving citizens of an empire which has to hold its place according to the universal law of survival through efficiency and effort. The special virtue of thought by visualisation is that it prompts doing rather than merely knowing.

The imperial attitude enters when we come to consider the point of view from which our young citizens thus reconnoitre the world which is to be the scene of their life's action. Our task as teachers of the twentieth century, responsible for the next generation, is to secure that our pupils shall view the world not merely from the standpoints of England, Scotland, Ireland, Canada, Australia, New Zealand, South Africa, or India, but that they shall identify themselves with the British Empire, which is far more complex than its component parts, and therefore demands higher powers of visualisation. This very difficulty of imagination is, however, the measure of the importance and urgency of the task. The conquest of space by speed has in our time reduced the relative significance of near and easily apprehended things. Must we not readjust our educational methods to the new situation ?

For reasons such as these it was that a Departmental Committee was in the autumn of 1902 appointed by the Secretary of State for the Colonies to consider on what system teaching in regard to the Empire might best be developed. I will conclude what I have to say by a few words descriptive of the work of this Committee, although that work by no means covers the whole field which I have traversed this afternoon.

The Visual Instruction Committee of the Colonial Office began by reporting that children in any part of the Empire would never understand what the other parts were like unless by some adequate means of visual instruction, and further, that as far as possible the teaching should be on the same lines in all parts of the Empire. The Committee were then empowered to take practical steps with a view to the realisation of their ideas. It was decided to make a beginning by an experiment on a small scale, and for this purpose to invite the three Eastern Colonies of Ceylon, the Straits Settlements, and Hong Kong to bear the expense of a small book of lantern lectures on the United Kingdom for use in the schools of those colonies. Further editions of these lectures have since been issued to suit the special requirements of other parts of the Empire, and at the present time the lectures on the United Kingdom are in use in Ceylon, the Straits Settlements, Hong Kong, Mauritius, Sierra Leone, the Gold Coast, Southern Nigeria, Trinidad, British Guiana, Jamaica, and in the following Provinces of India :—Madras, Bombay, Bengal, the United Provinces, the Punjab, Burma, Eastern Bengal and Assam, the Central Provinces, the North-West Frontier Province, and British Baluchistan. In short, the system has been introduced throughout the tropical zone of the Empire.

Having thus completed an instalment of their task, the Committee turned to a fresh aspect of their work, the preparation of illustrated lectures on the Overseas Dominions and India as well as on the United Kingdom. At this point, however, they were met by a difficulty. There are no doubt in the open market many excellent photographs and lantern slides available for illustrating the chief lands of the Empire, but they have usually been collected either without system by passing visitors whose main object was other than educational, or by residents who, from the very fact of their familiarity with the scenes, are apt to omit pictures of those contrasts which for the stranger are most salient. Such considerable

collections as are available have usually been made for special purposes, as for the promotion of religious missions, or of emigration. Moreover, there are frequent difficulties of copyright. The experience of the Committee therefore convinced them that if this part of the work were to be done as well as it could be done, it was advisable to have the illustrations prepared on a uniform system by an artist specially commissioned and instructed for the purpose. They were so fortunate as to interest in their work at this stage Her Majesty the Queen, and through her powerful and gracious support, and that of Lady Dudley and a Committee of Ladies who were good enough to collect a considerable sum of money for the purpose, they have been able to make a beginning of a work which it will take some time to complete. The Committee's artist, Mr. A. Hugh Fisher, has travelled through India, Canada, Australia, New Zealand, the Fiji Islands, Singapore, North Borneo, Hong Kong, Wei-hai-wei, Somaliland, Cyprus, Malta, and Gibraltar, everywhere collecting material according to the directions of the Committee for the purpose of constructing illustrative lantern slides. Eight lectures on India were issued last December, and to illustrate them a set of 480 slides. These may be obtained, a considerable proportion of them coloured, for the sum of £50, or uncoloured, except in the case of the maps, for the sum of £26.

In one respect the slides illustrative of the Indian lectures represent an important advance on those of the United Kingdom. They include more numerous maps of the land-relief to which the pictures are related, so that the ideals which I have endeavoured here to sketch are more nearly attained. For the sake of accuracy in dealing with so vast a region the text of the lectures has been minutely revised by a number of our chief authorities on Indian subjects, but this has not been allowed to interfere with vividness of presentment or with the interchaining of the maps and pictures, so that the challenge to visualisation might not be lost. At the present time three other similar courses of illustrated lectures are being prepared, respectively on Australasia, Canada, and the ring of Imperial stations round Europe and Asia from Gibraltar to Wei-hai-wei. It is intended that these shall be issued in the course of the present year. The hope of the Committee is that educational authorities may take the scheme up, and supply schools with the illustrative material by a system of loan. Already the Scottish Provincial Com-

mittees, and the Army Council in respect of the Army Schools, have adopted this course.

One last point should perhaps be dealt with. There are now many methods of depicting scenes to the eye, among them, of course, the ubiquitous cinematograph. At present, at any rate, for the purposes of school teaching, unless under exceptional circumstances, the cinematograph appears too cumbersome and too expensive; but apart from these practical difficulties, I venture to plead for the simplicity of the lantern slide. Our object in visual instruction is not to render thought unnecessary, but rather to call forth the effort of imagination. Personally I disbelieve in complex apparatus for teaching, wherever it can be avoided. The young child loves the battered doll, which amply serves to focus the imagination. Similarly I believe that the good teacher can make the blackboard and the lantern slide speak to better educative purpose than he could the cinematograph. The so-called picture palaces of the present moment debauch the imagination by relieving the spectator of all effort. The picture painted by the artist is more stimulating than the photograph for the very reason that it suggests rather than reproduces. Visual instruction, it must be remembered, aims at increasing the mental powers in a particular direction, and for this purpose we must not render unnecessary effort of the mind. When the child gesticulates in reply to a question we may know that the mind's eye is at work. Does not the distant look in the more mature eye betoken a similar fact?

May I summarise the four points which I have endeavoured to make. They are—

- (1) that with the exception of the national epic, our teaching of history, essential for the citizens of a modern democracy, should for children be incidental to geography;
- (2) that geography thus lifted to be the chief outlook subject in our school curriculum should be taught by methods which demand visualisation;
- (3) that we should aim at educating the citizens of the many parts of the British Empire to sympathise with one another and to understand Imperial problems by teaching geography visually, not only from the point of view of the Homeland, but also of the Empire; and

- (4) that among many other excellent aids to such teaching, there is now becoming available an apparatus of illustrated lectures prepared under the authority of the Visual Instruction Committee of the Colonial Office.
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ON SOME ASPECTS OF THE TEACHING OF IMPERIAL HISTORY.

By Hugh E. Egerton.

It is with extreme diffidence that I am speaking to you to-day, especially after one so admirably versed in the teaching, no less than in the principles, of geography as is Mr. Mackinder. Appointed to a chair of history at an age when the intellectual muscles are growing stiff, and less responsive to new influences; having taught myself the little history that I know, I should be sorry indeed to dogmatise before experts about its teaching. If I cannot say of myself as one, who was not merely an Oxford professor, but a great man, used to say, that he had never examined others or himself passed an examination, I am none the less at sea, when considering the details of systematised and co-ordinated education. Nevertheless when I was invited to read a paper at this Conference, on the ground, I presume, that the chair which I occupy at Oxford represents almost the first formal recognition of the importance of the imperial aspects of our history, I felt that it would be disloyal to refuse.

Taking into consideration what I have said as to my own limitations, I trust that I may be forgiven if I deal somewhat generally with my subject rather than with the details of its practical working. It is hardly necessary at this time of day to labour the point that in the study of history, as in other things, we all want to think imperially. (Some of us may regret that the word Empire, which suggests such a different meaning, should have to be used for the amalgam of states and relations which go to make up the present British Empire. But, after all, names matter little if we are clear regarding the meaning to be conveyed.) In no respect is the contrast more striking between the historian of the first half of the 19th century and the historian of to-day than in his treatment of the imperial aspects of the history of England. Especially is this true of that first English Empire which was lost by the winning of American

independence. Consider the scanty mention of colonial questions by Macaulay; a subject which one might have expected would have especially appealed to him. A more recent historian, Goldwin Smith, in spite of the fact that he had for years been living in North America, was so strongly under mid-Victorian influences that you will find very little in his history of England regarding the American colonies before the culminating events connected with their loss. You may search in vain through the pages of such an excellent book (except indeed in one appendix) as Christie's *Life of the first Lord Shaftesbury*, without realising that his most permanent title to fame was that he was a great colonial minister and empire-builder. It is to the newer school of American historians that we owe the better understanding of our 17th century history; but in any case we have entered into the heritage of their labours.

But if we shall all be agreed that in historical work at any rate the tone and temper of the little Englander must be a thing of the past, it is by no means so easy to put our pious aspirations into practical effect. There are two ways in which we may endeavour to deal with the history of the Empire. We may elect to divide it into so many water-tight compartments and deal with the various portions as so many separate countries in the manner of an encyclopædia or Whitaker's Almanac.

To a certain extent this method is inevitable. As Canadians, Australians, or South Africans, or even as Englishmen, and Scottish or Irish, we have need to know the facts with regard to our own particular portion of the Empire. At the same time I am convinced that it is extremely difficult to make such details living to those who are not familiar with the physical and moral environment in which they took their rise. In this connection I may call attention to a modest little book by Professor Edgar, of the South African College, Cape Town, *The Expansion of Europe, with special reference to South Africa*, which aims at including only so much of European history as may make intelligible the subsequent history of South Africa.

Great is the Diana of the examination system! and, if she affirms that certain facts are to be known, known they will be, for the time, by the compliant youth of the Empire; though how long that knowledge will be retained Heaven forbid that we should enquire. I have myself lectured on the early history of the Carolinas, and all I can

say is that I should be sorry to be asked a question on it by any Rosa Dartle of my audience.

But if the intellectual limitations of mankind forbid, to most of us, a complete knowledge of the details of the history of the Empire, past and present, may we not, by grouping our selected facts round certain main principles, obtain a dignity and a harmony in our imperial history otherwise lacking? I will illustrate what I mean by a concrete example. You are aware that the enlightened munificence of the late Mr. Louis Spitzel furnished funds for the production of text-books of imperial history; and many of you are no doubt familiar with the work on *The British Empire* which was the first result. I should be the last to say a word in criticism of a book for which I have the greatest admiration, and of the editorial committee of which I was myself a member. At the same time, when the form of the book was first considered, I ventured to submit that, considering the excellence of the text-books which already existed concerning the separate colonies, what was wanted was rather a history of the British Empire from the point of view of its expansion, physical, economic, and constitutional, giving detailed chapter and verse for the pregnant suggestions of Seeley, and carrying the work into new fields which were hardly ripe for treatment when Seeley wrote. The complete answer to my proposal was that Mr. Spitzel desired the treatment of the subject which has prevailed. Against the *sic volo sic jubeo* of the donor there is nothing to be said; and very probably, for teaching purposes, the volume as issued is more useful than would have been one which fulfilled my ideal.

Be this as it may, in the remaining minutes allotted to me I shall venture to lay stress on three subjects connected with imperial history, interest in which need not, I think, depend upon conditions of time and space. One of the subjects is mainly connected with the Empire which is a thing of the past. The other two belong to the self-governing Empire of to-day; the one concerned with a constitutional victory, won and assured; the other with the evolution of a principle, the full consequences of which are yet on the knees of the gods. These three subjects are "The mercantile system," "The evolution of colonial self-government," and "The development of the federal principle." These are subjects which transcend the boundaries of any one country or colony. There is nothing parochial or particularist about them; and yet

I venture to say that if anyone knew at first hand the colonial history connected with these questions, he would know a great deal about the more permanently important aspects of imperial history, and would be worthy of taking his place as a citizen of the most marvellous State ever conceived by the mind of man.

Possibly a cold shudder may have passed through the British portion of my audience at the mention of my first subject, "The mercantile system." Is this to be tariff reform under another name? and are our historical studies to be made interesting by providing copy for our political prejudices? If I thought that there were even a possibility of this result, I for one would most assuredly not make this suggestion. I can imagine no greater betrayal of trust than for the historian or the teacher to play the rôle of the pamphleteer or advocate. Every man has of course a right to his own political opinions; but he must be singularly presumptuous or singularly maladroit if he cannot avoid protruding them on occasions when they are not called for. In sober truth the mercantile system, though its *raison d'être* may have depended upon arguments which appeal to the modern tariff reformer, was at work in such a different kind of empire from that of to-day that it is most difficult to draw from it practical lessons for present needs. Indeed the most generally accepted lesson to be drawn from the facts of its history is that it wrecked the then empire, by subordinating the interests of the colonists to those of the English merchants and manufacturers. But, after all, this is not the main question. The main question is that, round this principle of the mercantile system, you can form a coherent and systematic idea of the English Empire of the 17th and 18th centuries, in a way which otherwise is impossible. The ideal of a self-sufficing empire—naval stores no longer to be obtained from European countries, possibly hostile—the development of English fisheries and the maximum of employment for English ships and seamen—the mediæval practice of staple towns for certain products to be adopted and developed and England to be the staple for the resources of the Empire—the colonies to be the producers of raw products, which should furnish materials for English manufactures—it was on ideas such as these that the English colonial empire, as indeed the colonial empires of other European States, took its rise and found its natural justification. But, in studying the facts connected with the working of the mercantile

system, you are naturally confronted with the facts which threatened, from the first, its ascendancy. The mercantile system assumed colonies to be plantations, *colonies d'exploitation*; what was to happen when they proved *colonies de peuplement*, settlements of men? The idea of a self-sufficing empire postulated the existence of a general controlling Parliament; what was to happen when this Parliament represented the selfish interests of one particular portion of the Empire? The mercantile system and the Empire which was its outcome were based on the view that trade considerations dominated the minds of men; what was to happen when the dissidence of dissent called forth a new type of colony, and reminded statesmen and Parliaments that man does not live by bread alone?

Thus, round the single principle of the mercantile system you have grouped all the causes which led to the development of the first English colonial Empire, and all the causes which, in the end, led to its dissolution. Guided by this clue, which connects us with the main currents of European economic thought, we may pass through the labyrinth of difficult details, which else might end for us in an *impasse* of tedium and disgust. In considering such questions as the causes which led to the loss of the American colonies, we are travelling, though in no garb of political partisanship, a road which may still have its lessons to the thoughtful citizen.

Concerning my second subject, "The evolution of colonial self-government," there will, I presume, be no difference of opinion. We all shall admit its importance and its value as, on a smaller scale and with simpler material, bringing out the underlying principles of the British Constitution. In Great Britain matters were so complicated by the non-representative character of the popular branch of the legislature, and by the indirect methods of influence possessed by ministers and the monarch, that it is difficult to mark the exact moment when the people really attained to self-government. Some would say that only now is the democracy really beginning to be conscious of its power. But, on the colonial stage, things were very different. There the absence of a territorial aristocracy and the poor figure cut by a temporary governor, compared with the august glamour of the hereditary king, brought about that the assemblies were representatives of the people in a manner unknown in Great Britain till long after the passing of the first Reform

Bill. In the colonies the struggle for responsible government, *i.e.*, government by the accredited representatives of the people acting through a majority of the dominant house of the legislature, was short and sharp; and each stage in the contest can easily be noted and recorded. In the Honour School of Modern History at Oxford it is expected that candidates should take up one of some ten prescribed special subjects, which they must study through the reading of contemporary documents. Among these special subjects is now "the evolution of Canadian self-government." Why we chose the evolution of Canadian rather than of Australian self-government was that the material with which to deal was more ready at hand, and that the background, from which one starts, was in the case of Canada more picturesque and interesting. The admirable series of Constitutional Documents between 1759 and 1791, edited by Mr. Adam Shortt, whose loss to the University of Kingston has been the gain of the Canadian Civil Service, and Dr. Arthur Doughty, the indefatigable Canadian archivist, who is making of his office at Ottawa the Mecca of all who value the scholarly treatment of documentary material, gave us a starting point, to which it was only necessary to add Lord Durham's memorable Report, the Acts of Parliament relating to Canadian Constitutional questions, from the Quebec Act of 1774 to the British North America Act of 1867, a volume of constitutional documents, to fill in the gaps between the statutes, edited by Professor W. L. Grant, of the University of Kingston, and myself, and lastly some speeches from Hansard's Parliamentary Debates. The period dealt with is little more than a hundred years; and yet what a record it unfolds of constitutional evolution; not revolution! We start with a conquered province. Quebec, that has carried on, against heavy odds of numbers and with little help from the Mother Country, the half-century of conflict against the American colonies and Great Britain, lies prone and exhausted beneath the feet of the conqueror. Most wisely Great Britain decides to use her giant's strength with wisdom and moderation; and from the first, the French Canadians are promised the benefits and privileges of British subjects. On the surface a jarring note seems to be struck by the British Proclamation of 1763; which, whilst it holds out the hopes of a popular Assembly, seems to abolish with one stroke Canadian laws, customs and forms of judicature, a thing (according to Lord Mansfield) "never to be attempted or wished." An American scholar, however, Professor Alvord, of the

University of Illinois, has given good reasons for holding that the Proclamation of 1763 was drafted in a hurry, with special view to the Indian peril; and in any case the policy which it seemed to adumbrate, that of obtaining an Anglo-Saxon population for the French province, proved wholly impracticable; so that the British Government returned to its original aim of concentrating its attention upon the conciliation of the French. The Quebec Act, as you doubtless know, gave formal sanction to the French laws and customs, and put on a legal footing the payment of tithes to the Roman Catholic Church. In passing we may note the very different character of George III.'s attitude towards the Catholic Church in Canada and in Ireland, and the political consequences in both countries which followed thereupon. Considering the feudal past of Canada, the absence of education or of training in local self-government, the decision under the Quebec Act, not to establish a representative Assembly, was, for the time, doubtless wise; though we must note the reaction upon British policy elsewhere occasioned by the troubles already arising in the American colonies. The doings of these American provinces more directly affect the history of Canada; when, upon the coming to birth of the United States, the cruel treatment accorded to the loyalist minority caused thousands of these loyalists to shake the dust off their feet of their old homes, and to find a refuge in the North under the British flag. But these Americans, loyal as they might be to the Crown and Parliament of Great Britain, had inherited the old colonial birthright of representative institutions, and could not for any length of time be cabined or confined within the four corners of a paternal autocracy. The Constitutional Act of 1791, which recognises facts by constituting the Western portion of Quebec, whither the united Empire loyalists had in great numbers resorted, a new province, and by granting to both provinces a representative Assembly, is the direct outcome of the loss of the American provinces. The old English American Empire in its death throes has strength to give birth to a child, which in the fulness of time is to be no mean rival to its once alienated kinsfolk. Henceforth the old standing difficulty between an Assembly that was given power, by means of the power of the purse, but denied responsibility, and a government that was loaded with all the responsibility, but often possessed only the shadow of power, was bound to recur. Racial antagonisms, as in Lower Canada, sectarian differences as in Upper

Canada over the question of the clergy Reserves, exacerbated the strife; but Lord Durham was doubtless right when he declared that in the very system of British colonial government there were the seeds of inevitable disunion. But responsible government was by no means the easy thing to introduce that it appeared to the haughty self-complacency of Lord Durham; and the short period of Lord Sydenham's administration is full of suggestion with regard to the difficulties in the way and the manner in which they might, tentatively, be surmounted. - The passing of the Act of Union of 1840 was the partial adoption of Durham's policy of trusting to an Anglo-Saxon majority to prevent the possibility of mischief from a possibly disaffected French population being entrusted with the management of their own affairs. The rebellion in Lower Canada of 1837 and 1838 from a military point of view was despicable enough, and even politically it was feeble, because resting under the ban of the church. But it showed plainly that French-Canadian sympathies were not with the Government; and if responsible government was to be given, the union of the two Canadas was a condition precedent, unless the separation of French Canada was to come within the range of practical politics, a conclusion unthinkable to imperialists of the type of Lord Durham. But the union as effected by the Act of 1840 proved no real union in the sense of being a fusion of the two races. An unfortunate provision in the Act, which gave equal representation in the House of Assembly to the British minority of the Upper Province, emphasised the permanence of lines of separation; and became, in time, the cause of an inverted grievance, when the British in Upper Canada had grown into a great majority and still found themselves represented by only half the numbers of the Lower House. The political history of Canada under the Union is the story of the breakdown of party government, where the main issue really lay not between rival parties but between rival races. The union was in fact an unwritten and clumsy federation, and every ministry was an inevitable coalition, wherein each portion of the Province was represented by its leading minister. But what was agony for Canadian public men is admirable material for students of constitutional history; and there can be, in its way, no more instructive reading than to compare the remarks in Lord Grey's *Colonial administration of Lord John Russell* with the actual experience of Canadian governments.

Our period closes with the British North America Act, not so much from the point of view of attempting to do justice to it as an embodiment of the federal principle, as from the point of view of regarding it as the complete fulfilment of the ideals of Canadian self-government.

If I have wearied you with the repetition of facts probably as familiar to you as they are to myself, my excuse must be that the moral to be drawn from them is not so generally accepted as it might be with advantage to all. Instead of colonial constitutional history being considered as a subject apart, to be studied only by those who show a special interest in colonial questions, why should it not be read, in the upper forms of English public schools and elsewhere, side by side with the English constitutional history which it illustrates and makes much more intelligible? In the times that are before us questions such as the possibility of the preservation of the party system of government, with the evolution of powerful groups representing separate distinct interests, will perhaps become more and more prominent. Is it a small matter that men should approach their consideration assisted by the light and by the leading that comes from the study of such questions on the smaller and less crowded stage of colonial experience, where the existence of the colonial status causes the historian to be less diverted to the pomp and panoply of military undertakings, and where, in the sharp lights of a clear and crisp atmosphere, issues can be more clearly discerned than they can ever be amidst the immemorial mists and shadows, haunted by the hardly yet disembodied ghosts of old ideas and old associations, which make for the American and for the colonist the wonder and the charm of old England?

But if the evolution of colonial self-government is a subject for which we can claim approval from the man in the street on the ground of its utility for the practical purposes of civic education, with still better reason can this claim be made for my last subject, "The development of the federal principle." Whether we like it or not, we are living at a time when institutions which we have taken as a matter of course are being submitted to the ordeal of fierce hostile criticism. The Constitution, which seemed in the first half of the 19th century the envy of continental Europe, is in the melting pot, and he would be a bold man who should predict the form in which it will ultimately emerge. There is general

agreement that somehow or other a more systematic organism must be found for the disjointed portions of the British Empire, if they are not sooner or later to fall away from each other. It is idle to expect that, if the Dominions continue to develop as they are developing to-day, this little island, and even its capital, London, can continue to be the centre and the heart of the Empire in the manner that they have been in the past and still are. In this state of things there are difficult problems, problems connected with the organisation of Great Britain and Ireland, problems connected with the wider organisation of the British Empire as a whole, which the next generation may have to solve. Surely for such an undertaking there can be no better preparation than careful study of what has been done by our kinsfolk in the past. The achievement of Canadian or Australian federation may have been child's play compared with the accomplishment of a federal Greater Britain, and I confess that the growth of the national idea in the various oversea Dominions makes the task to be done different from any for which there are past precedents; still, the manner in which Canadian and Australian statesmen worked for their common goal, affords a lesson which is of good augury for future efforts, whilst the details of the Constitutions which issued from the intellectual blows and counterblows of men of our stock, are full of suggestion to those who may be called upon, at least by approval or disapproval, to play their part in adapting a venerable Constitution to new needs.

Special circumstances may be very different; but it can never be without a lesson for us to recall the action of the stalwart Canadian liberal, George Brown, who, out of the nettle of the breakdown of party government, plucked the flower of a Greater Canada; or of John A. Macdonald, by the testimony of his opponents the greatest of Canadian statesmen, whose work it was, as closely as circumstances would allow, to build Canadian Confederation on the lines of the old British models which he so loyally revered. Read the powerful arguments with which in the Canadian Parliament in 1865 Mr. Dunkin and Mr. Antoine Dorion opposed Confederation, and you will realise how, if dowered with all other qualities, we lack faith, the mountains of constitutional difficulties will not remove themselves before us. In undergoing the excellent gymnastic of reading the 91st and 92nd sections of the British North America Act,

which allot their respective functions to the central and provincial legislatures, together with the cases that have been decided on these sections, we learn, as hardly anything else could teach us, how obvious must be the statement of the legislator's intentions, if he is to cope with the subtleties of judicial decisions. In the British North America Act of 1867, we see the attempt to found another federation on American soil, taking after the United States Constitution, so far as the federal principle is concerned; but otherwise, in the granting of residuary powers to the central legislature, in the repudiation of the principle of a non-parliamentary executive, and in other ways, representing a deliberate reaction from American ideals. In what history can you follow so well the powers of science in arresting the natural tendencies of physical conformation as in the story of the Canadian Dominion, it being no exaggeration to say that the building of the Canadian Pacific Railway gave life and being to the idea of union between West and East, hitherto existing merely on paper? Nowhere more clearly than in modern Canadian history can you follow the coexistence of a genuine nationalist spirit with a vigorous and rather aggressive provincial patriotism, a fact of excellent omen to those who desire to make imperial citizenship a greater reality, without impairing the force of any other tie. We shall not study colonial institutions with the predetermination always to approve, and some of us may think that the Canadian Senate is no great improvement upon our own House of Lords. But whatever our opinion on this or that detail, we cannot study these great Constitutions without going much more to the root of things than most of us, in England at least, have been accustomed to go.

In some ways the Australian Constitution is still more instructive, because it was the issue of longer and more closely reasoned discussions, and because, whereas the Quebec Conference was held with closed doors, the numerous volumes which record the elaborate deliberations which preceded the Commonwealth Act of 1900 are a mine of intellectual wealth to all interested in the working of the federal principle. I am bound to add that, if the subsequent history of the Commonwealth has been interesting, its main interest has, I think, depended rather on the measures taken in the field of economics than on the light thrown on the working of the federal principle. Thus the questions referred this month to

the decision of the Australian people, the effect of which is to enlarge the powers of the central legislature in industrial matters, though indirectly they tend to the diminution of the powers of the States, have their rationale in the struggle between labour and capital, and not in any deliberate idea to exalt the central authority.

Lastly there is the South African Union, of the working of which it is too soon to speak. But, in some ways, its establishment is of still happier augury than was the establishment of the Canadian or Australian federation. The dullest of us was thrilled with a new sense of the power of centripetal tendencies when he saw men, lately the antagonists in a deadly war, working shoulder to shoulder for the common benefit of South African political and economic interests. Here at least we may all recognise that under our separate conditions the cry comes home, "Go thou and do likewise."

In the foregoing pages the point which I have endeavoured to bring out is that however much we, who are interested in the teaching of imperial history, may desire that that teaching should be as general as possible, we are conditioned by the stress and competition of other studies, and that therefore we must recognise some principle of selection. I have sought to show that that selection may well be made on the principle that the details chosen for study should admit of general applicability, and be such as may be of real use for the practical work of imperial citizenship. For this purpose I have put before you three subjects. No doubt other subjects will occur to other people. It does not matter what the subject is, so long as it is not tarred with the brush of mere local particularism. There is one subject which I should wish to have included; but, unfortunately, the material is, for the most part, wanting. The story of colonial expansion, of the steady march of the unknown millions, filling and replenishing the earth, still awaits its historian, who shall do for it what Walt Whitman claimed to do in the field of poetry for the average, commonplace man. But the material on which the historian or historians (for it would require hundreds of them) must work is, for the most part, lacking; and no carefully prepared statistics or Parliamentary Reports can take the place of the diaries or letters of unknown forgotten empire-builders in their war with the wilderness. Let us at least never forget that the long struggle for the expansion of Greater Britain has been in the main a war

carried on by the private soldier; and that, amidst our tributes to the empire-builders of the past, a special cairn must celebrate the unknown dead.

Nor, in thus assuming a practical direction to our studies, are we arrogating to ourselves or those connected with our work the actual business of legislation. We may be far removed from the seat of government. We may have nothing to do with the actual framing of laws. But we can, and we must, all of us, whatever our position, influence in some degree the spirit in which they are made, and still more the spirit in which they are carried out. It was a school inspector, Matthew Arnold, who first used the expression "sweet reasonableness" as the quality especially required in the England of his day; let our modest thankoffering for the splendid inheritance of our imperial history be a reasonable and impartial mind, to draw conclusions from evidence, before which the rhetoric and bluster of the mere partisan will wither and efface itself, like the snake-woman before the cold gaze of the Greek philosopher.

SUMMARY OF THE DISCUSSION.

Sir HERBERT RISLEY (India Office) illustrated the principles underlying Mr. Mackinder's paper from his own experience as an official in India. He said that it had been his experience to inspect a vernacular school in Bengal in geography. He asked the children all kinds of questions about population, the latitude and longitude of many places, all of which the pupils answered with success. They knew all about London, its population and the statistical facts about it, but when he asked them how they would get from London to their own village there was no answer. He then asked the children how they would go to Calcutta; still there was no answer. He then asked how they would get to the nearest railway station, and the only reply he got was a very sketchy one. Children in Indian schools could repeat pages of facts of English history, but he doubted whether they had the faintest idea what the persons they talked about would look like. He believed that they thought of Henry VIII. as an Englishman with a *solar topee* and riding breeches and Queen Elizabeth as a *memsahib* in a tea-gown. He had tried to introduce into Bengal a book of pictures illustrating history based on a German model, but though

everyone said it was a most admirable idea, nobody took any steps whatever to give effect to it.

He commended to the consideration of the Conference the suggestion that Englishmen who were interested in education should have as good material of this kind for teaching history as the Germans had.

Prof. RAMSAY MUIR (University of Liverpool) said that in teaching history in the Universities the great difficulty they had was in the inferiority of the previous teaching of their students. He had often hoped that the difficulty might be to some extent removed by the introduction into the curriculum of the schools of a larger and solidier element of imperial history. He would rather see history dropped from the curriculum of elementary and secondary schools altogether than have pupils coming to him with the kind of knowledge that they have in their heads and the kind of detestation they have in their hearts for their subject. He was inclined to sympathise with Mr. Mackinder, who, although he said that the study of history was essential for democracy, nevertheless frankly reduced history to an entirely subsidiary position—in fact, he co-related it with geography in the same way that in the nonsense rhyme the lady was co-related with the tiger. He had listened to Professor Egerton in the hope that he was going to explain how the schools could send to the Universities the people with the kind of minds not the kind of knowledge that one wants to have the handling of, but he did not quite feel that he had got it from Professor Egerton either. He had sometimes thought that in the story of imperial history if we frankly jettisoned the old stuff, we could get something that would fertilise the imagination of the children. There are two important aspects of the history of our race, the first being the invention of the machinery of self-government, and the second the expansion of that machinery, and a thousand other things as well over half the face of the globe. Children cannot be interested in the machinery of self-government, but Professor Ramsay Muir thought that it might be possible to write an extraordinarily thrilling short history of British colonisation starting with the reign of Queen Elizabeth and dropping almost all the details of home politics except in so far as they were necessary for reference. You would then get a story which would be genuinely epical, and would excite the interest of children who cannot understand the Constitutions of Clarendon and the like. Having begun in

this way, the moral at which one would arrive at the end would be, "How is it that the English have been able to enter into the inheritance of all the other races that have colonised?" and the answer would be, "Because they had acquired the habit of self-government." Then at a later stage, in the secondary school, the pupil could be taken back to see how that habit was acquired, and what it meant in its working. He had tried to persuade some teachers to attempt a scheme of this kind and they had tried it, not without success. It gives the pupils in the end a tradition and a vision which our city population especially need. He would be sorry if we had to fall back upon the snippets of historical information to illustrate geography which Mr. Mackinder had held out as the only desirable thing to be done.

Miss DAY (late Headmistress of the Grey Coat School) said that, although she was in favour of headmistresses and headmasters receiving all possible credit, she thought that the large majority of great men would not accept Mr. Mackinder's suggestion that it is the schools that make the men of England, and would attribute their greatness to their mothers. She explained how she had put into practice the method of visualising instruction by forming a large collection of historical portraits in order to illustrate history teaching in schools.

Prof. LODGE (University of Edinburgh) said that he had had no intention of taking part in the discussion, but had been brought to the front by Professor Ramsay Muir's remarks. He agreed with the greater part of Mr. Mackinder's paper and believed that the knowledge of geography was the best foundation for the study of history. He was in sympathy with Mr. Mackinder's warning against the exaggeration of visual training, and believed that by overdoing this, the training of the imagination, one of the most important functions both of historical and geographical teaching, was diminished. There are really three problems which have to be grappled with to-day, the problem of primary education, the problem of secondary education, and the problem of university education. So long as the primary school course ends at 14, it is absurd to frame an ambitious scheme of historical study embracing the whole of imperial history and those fragments of universal history which Mr. Mackinder would throw into his geography lesson. He thought, however, that it was possible to give in an elementary way the conception of the great

continuity of English history. Professor Ramsay Muir said that you could not interest children in the Constitutions of Clarendon. That was true, but you might interest them in Thomas à Beckett, and the Constitutions of Clarendon are merely a detail in the great struggle between Church and State which is personified in the persons of Thomas à Beckett and Henry II.

We have to realise in this country that if we are to train our people for their duty as future citizens, their education must not stop at 14. We have to consider the place that can be given to a sane system of history teaching in continuation schools, which must not be too purely and solely technical but must concern itself with the training of citizens. He agreed and sympathised with Professor Ramsay Muir's lament over the poor material that comes before a University professor but held that this was no reason for sweeping away the teaching of history, rather that the teaching should be improved, and enormous changes are now taking place in this matter, both in England and Scotland, in secondary schools. More and more people are being sent out from the Universities well qualified to teach history, and he believed that in a little time the Universities would get very much better material than they got to-day. It is only within the last few years that the Universities had done anything considerable in the teaching of colonial or imperial history. In conclusion, he felt that while he attached the greatest value and importance to the history of the growth of the Empire and admitted that it could be treated in a most interesting and efficient way, yet on the whole it must be superimposed upon the foundation of the study of our national history.

Mrs. CLEMENT PARSONS (The Parents' National Educational Union) explained, in connection with Mr. Mackinder's paper, the lines suggested by the Parents' National Educational Union for introducing their own children to geography. Their lessons should begin with the natural objects met with in their walks which may be used to illustrate the main features of geography. The principle upon which the union lays stress is that lessons on place should be given out of doors. When taught in this way children are prepared to assimilate later on their school lessons in geography.

Prof. LYDE (University College, London) said that he had been particularly moved to speak by

what Professor Lodge had said. He thought that Mr. Mackinder might especially have emphasised the supreme value here of the right teaching of geography, because we are an imperial democracy. His belief was that it was the sea which bred democracy, and that, whatever our personal political views might be, we were at heart essentially democrats because we were islanders. The sea is responsible for our national character, our national commerce and our national inheritance, and we ought to be able to adapt ourselves to the environment of it and to visualise it. It is precisely here that our geography has an imperial value. It teaches the forms and forces beyond the horizon and it is particularly curious that a nation of shopkeepers has not insisted ages ago on having its geography properly taught, because nothing is so important to a man in his business as a clear understanding of his customers at home and abroad. The power to picture truly and clearly is easily acquired and easily maintained and developed. Before attempting to picture the unseen it is necessary to picture the seen, so the child must begin with the surroundings of his ordinary life. He believed that the average normal boy in England possessed the power of visualising quite easily. He had observed that whenever he found a boy who could not do this, that boy, when his genealogy was traced back, was generally found to be not an Englishman, not an Islander, but of continental origin.

Prof. HERBERTSON (University of Oxford) emphasised the importance of the studies of geography and history and agreed with Mr. Mackinder and Professor Lodge that a great deal of historical information ought to be introduced into the teaching of geography. He wished to suggest that, when an interchange of teachers is arranged between any colony and the home country, the teachers of geography should get the first chance. It is particularly important for them to have a knowledge of the country which they describe. He also suggested that when this interchange was arranged the teachers should have some means of study at Universities. In the case of geography it would be of great importance, both for colonial students coming to this country and for our students going to the colonies, to have a three months' course in geography relating especially to the geography of the country to which they were going. But though this was possible in a good many of our Universities, he believed that it would not be possible in the oversea

Universities and he would urge upon the delegates from overseas the desirability of making Chairs of Geography in their leading Universities.

Mr. HENRY HOLMAN (Child Study Association) brought forward the criticism that the readers of the papers had not stated at what age the ideas which they recommended were to be presented to the children. He thought they were wise in this, as the ideas put forward were the ideas not for adults merely but for cultured and accomplished adults. He urged that the study of Child Psychology had shown that the child did not realise itself as a part of a community until about his 13th or 14th year, when the social instinct developed. He, therefore, thought that these ideas should not be presented to children before that age. He protested against the mixing up of imperialism with geography. There is no imperial geography any more than there is imperial astronomy or imperial chemistry. He further emphasised the serious educational danger in supposing that you could not understand one thing unless you understood everything else at the same time. They had heard, "What can they know of England who only England know?" but he would ask, "What other land can they possibly know who do not know their England?" If you cannot understand one thing until you understand all things, there is an end to knowledge.

Principal ROBERTS (University College of Wales, Aberystwyth) called attention to the fact that a beginning has now been made in Wales in the study of imperial history by the endowment of an Assistant Professorship of Colonial History.

Mr. C. W. HOLE (National Union of Teachers) called attention to the work which is being done in the elementary schools of London in the teaching of history by means of lantern slides and school journeys.

Mr. MACKINDER then rose to reply. He said that he hardly recognised his own views as set out by Mr. Holman. With regard to the association of imperialism with geography, he expressly drew attention in his paper to the fact that he did not identify "Imperial" with the word "Imperialist." His object was not to

propagate any particular view of the Empire, but to render possible a real and level conception of the Empire according to any theory, and from that point of view he thought it essential to have a living knowledge of geography. He was particularly interested in the duel which had taken place between two Professors of History. He would like to ask Professor Ramsay Muir some questions about his epic of expansion beginning with Queen Elizabeth. In order that this might be a real and living thing in the mind of the child, the child must be able to visualise all this great complex world of ours. Before you can get teaching on the scale contemplated by Professor Ramsay Muir, you must have teaching, as Professor Lodge put it, on the scale which he contemplated in his paper. They must bear in mind that for every student in a University or a secondary school there are at least 100 children in the elementary schools of the Empire. These children are the masters of the Empire, and have the destinies of the Empire in their hands. It is essential that these millions of children should have a vivid presentment to their mind of the distant facts of geography and history as well as of the near facts. He held that this could be done, and the main object of his paper was to show the method of doing it which he had himself been practising for 20 years. He wished to suggest that Government Departments should aim at giving the greatest freedom to teaching of this kind in the interests of the Empire.

Prof. EGERTON, replying to the discussion, said that there was not much criticism of his paper with which he felt it necessary to deal. He repeated his explanation that he was merely speaking in his paper as a teacher at a University, and was referring to students of a University and not to school children. Although the Conference was more immediately concerned with elementary and secondary schools than with Universities, he felt that in these democratic days there must always be the question of the University behind, and he therefore felt it justifiable to deal with the student from the point of view of the University, and thought that none of the subjects which he had dealt with were over the head of a clever University student.

Wednesday, April 26th, 1911.

On Wednesday afternoon, April 26th, papers were read by Mr. Marshall Jackman, Member of the Consultative Committee of the Board of Education, Head Master of Sidney Road Council School, London, on "Experimental work in connection with the Teaching of Arithmetic in Elementary Schools," and by Mr. James G. Legge, M.A., Director of Education for Liverpool, on "Practical Education in Elementary Schools," and a discussion followed. After this, Mr. J. Strong, M.A., F.R.S.E., Rector of the Academy, Montrose, read a paper on "Secondary Education in Scotland," and this, too, was followed by a brief discussion. The papers and a *résumé* of the discussion are given below.

EXPERIMENTAL WORK IN CONNECTION WITH THE
TEACHING OF ARITHMETIC IN ELEMENTARY SCHOOLS.

By Marshall Jackman.

I esteem it a great pleasure to have the honour of opening a discussion at this important conference, when representatives of educational activities of our great Empire confer together on the important question of education. I have been asked by the President of the Board of Education to deal with the subject of experimental work in connection with the teaching of arithmetic in elementary schools.

Much difference of opinion exists as to the period in a child's school life at which it is desirable to commence the study of the various subjects in the curriculum. It will be readily admitted that the correct settlement of this question is of great importance in the economy of the child's time, and especially in that of the child in the elementary school, whose period of school life is very limited. If a pupil commences the study of a subject too early, much valuable time is wasted; again, if a pupil commences the study of a subject which depends more or less on his proficiency in some other subject, much time must be wasted by taking the two subjects concurrently. In elementary schools under the old rigid system of the English Codal curriculum, when the work for each year was based on a purely logical analysis of the various subjects in the curriculum, and was taken in

water-tight compartments without reference to the interdependence of subjects on each other, the waste of time was at its maximum. This objection to the old system applied more to the teaching of arithmetic, owing to the obligation to teach certain rules in certain classes, than to any other subject. For many years arithmetic stood out as the most important subject in the English Code, and the demands on the child from the very earliest age were psychologically improper in their order and also inordinate in their amount. Teachers were compelled to prepare their children to pass periodical tests imposed by outside examiners, and the teaching of the subject was necessarily much influenced by the preparation for these tests. Further, since the results of examinations in arithmetic could be tabulated more easily and more exactly than those of any other subject in the school curriculum, Inspectors attached undue importance to these results at all stages of the pupils' school life. Naturally teachers were led into the same error, and, as a consequence, many children were retarded in their progress through the school because of their backwardness in arithmetic in the early years of their school life.

Some 10 years ago I came to the conclusion that a radical change was required in the arithmetic curriculum of elementary schools. Under the freedom which at that time had been conceded to teachers with regard to the curriculum and methods of instruction I decided to experiment in the teaching of arithmetic, making a beginning in the lower classes of my particular school. I considered that, so far as arithmetic was concerned, we were wasting much valuable time in the school life of children of between seven and nine years of age in trying to teach them with great trouble what at the age of 10 or 11 they would grasp easily, with less labour on the part of the teacher and with less expenditure of their own time. I considered that much of the time then spent on arithmetic, especially in the early years of a child's school life, could with advantage be given to reading or some other equally suitable subject. I came to this opinion on the ground that the reasoning or logical faculties of young children are not sufficiently developed for them to understand the principles underlying arithmetical processes as they were then taught in schools working on ordinary English Code lines. I believed that the development of these faculties should be natural and gradual, and that any undue or excessive forcing only led

in the end to stagnation of development. I decided that only such propositions should be considered as the pupils could fully grasp at the time, and the problems set should be of such a nature that the conclusions could be readily realised. By experience I had been convinced that in the teaching of arithmetic if children were pressed beyond their capacity they fell back instinctively on the imitative faculty. The processes were memorised, and ability to recollect and reproduce was mistaken for intelligence. Under such conditions arithmetic lost its chief value—its value as a means for training the logical faculties. On the other hand, I felt sure that the faculties of observation and language might be developed more rapidly and to a much greater extent than is usual in the lower classes in elementary schools. With a greater opportunity for observation, with a larger practice in expression, and consequently a fuller and more exact vocabulary, I thought the logical faculties might be developed naturally and their development would follow, not precede, facility of expression. The principles which underlie what to a young child are complex problems, would be more easily apprehended at a later age. For example, in working out my experiment, I have since found, in actual practice, that long division of weights and measures, money and abstract quantities may be easily taught to children between the age of 11 and 12 in less than three weeks, whereas at the age of 9 to 10, at which they are generally taught in elementary schools, it requires months of uninteresting work, and even then the processes are but dimly understood, although the sums may be correctly worked.

At the time when I decided to make the experiment, the Regulations of the Board of Education for the teaching of arithmetic expected, under the Scheme A., the older syllabus of work, that a normal child below the age of 10 should be required to work sums in the first four rules, including long division of abstract quantities; notation up to 100,000 to be used; they were also expected to work sums in addition and subtraction of money. Under Scheme B., the later syllabus of work and the one generally in vogue to-day, the simple rules and compound rules (money) were expected to be known, but divisors and multipliers were not to exceed 99 and the highest number to be 99,999. No amounts of money either in answers or questions were to exceed £99.

Having decided to make a change, I determined to spend less time on arithmetic in the lower classes of my school, which was the senior department of an elementary

school, believing that with proper preparation and with the expenditure of no more than the usual time for arithmetic in the upper part of the school, the knowledge of that subject would not be diminished in quantity and might be improved in quality. I therefore decided to withdraw the teaching of all but the simplest arithmetical processes from the curriculum of classes below what is known as the Fourth Standard in our elementary schools. (Probably the term "Standard" will not be fully understood here and, therefore, I will translate "Standard" into what would be considered the normal age of children undertaking the work. Below Standard IV. would mean normal children below the age of 10.) I decided to confine my syllabus in these classes to mental work, and directed that no complex processes should be taught. Simple questions were to be answered orally or on paper, and all problems set were to be simple and easily understood. The numbers used were to be such as the children could readily grasp. The concrete examples taken were those with which the children were familiar in their every-day life, *e.g.*, marbles, pens, eggs, trays, desks, knives, forks, children's articles of clothing, animals, &c., and only transactions such as children could readily follow and understand were to be utilised in the setting of problems. The problems were not to be confined to the four simple rules, but were to include problems in fractions and also in practice and proportion. Later in working out the experiment I found it possible and desirable for the character of these problems to be extended, and the curriculum to-day in the lower classes, so far as is practicable, includes all kinds of problems given in the highest class of the school, but naturally the numbers used and the transactions dealt with are such as ought to be within the capacity of the children in the various classes. Thus it will be seen that my experiment in operation developed into a concentric system of teaching arithmetic. The children in the early stages are given a thorough knowledge of number. Numbers are analysed and their relative positions discussed. Sixteen would be analysed thus: twice eight, or eight twos, or four fours, or considered as ten and six, or twelve and four, or nine and seven, and so on. The relative position of, say, 37 would be discussed as three less than 40 or one more than 36, seven more than 30, &c. An endeavour is made to secure a thorough mastery of the ordinary tables, not by continually repeating them but by constantly using them.

There is no attempt to produce prodigies in mental arithmetic but only to prepare the pupil for the definite written work in the higher classes. While the teaching of ordinary processes on orthodox lines is thus delayed until a later period in the school life than is usually the case, problems involving all the rules are taken. A quite young pupil under the scheme readily takes 86 from 95, but he will take 80 from 95 and then 6 from 15; he can multiply 64 by 5, but he will multiply 60 by 5 then 4 by 5 and add the two multiplicands together. The children are also taught to write and read the expressions of quantity and various denominations, including money and weights and measures. They are taught to change quantities from one denomination to another, and in the end to acquire an intelligent skill in the application of the ordinary tables. Weights and measures and money tables are as far as possible taught by the practical use of the weights and measures themselves. Thus, before the age of ten, under the scheme the normal child would be so equipped that when later on he undertook the more complex processes of arithmetic he would commence the task with an adequate knowledge of notation and numeration, and of the more common tables, and with the power to change quantities from one denomination to another. So that the only difficulty which would be presented by any problem would be that connected with the simplest form of the actual processes involved.

I will now endeavour to describe as briefly as possible the work of the three lower classes. I may say, in passing, that before I commenced my experiment I induced the head mistress of the infants' department of the school to drop all teaching of rules in her department and to confine the arithmetic lessons to purely mental work and notation. In my scheme of work, I specially laid down the following conditions :—

1. That the terms used in the problems should be familiar to the children.
2. That the problems should deal with transactions which will be readily grasped by the children.
3. That no problem should be set which cannot be solved mentally.

In order that the reasoning faculties may be brought into play to the fullest and widest extent, no set method of solution should be insisted on, the application of common sense to the operation is all that should be

required, and any solution which is clear and logical should be accepted. During this period the application of natural reasoning is the underlying principle of the scheme, and the main object is the orderly development of the reasoning faculties. At the end of the third year's course the problems will involve such numbers as will necessitate the use of definite methods and the orthodox rules will then be gradually introduced. When that stage is reached the previous training should enable the child to apply the orthodox rules with the fullest intelligence, but at no stage should any individual method of solution be rejected which is clear and logical. As in the three lower classes, in each succeeding class beyond the fourth, the syllabus will contain problems of greater difficulty. The syllabus even of the lowest class in which written work is commenced will deal with problems involving addition, multiplication, subtraction and division of abstract quantities, money, weights and measures and reduction of money, weights and measures, also very simple problems in proportion, vulgar and decimal fractions, practice, percentages, interest, mensuration, and in their simplest form, algebraic and graphic solutions.

In the three lower standards a thorough knowledge of numeration and notation should be acquired and all tables should be constructed and eventually memorised, so that the child is fully equipped for applying the orthodox rules with facility and accuracy on reaching the fourth class. In all classes great stress must be laid on the reproduction by the children themselves of the methods used, which in the lower classes must be chiefly oral but in the higher classes should be both oral and written. In applying the scheme in the three lower classes, an arithmetic lesson is taken at every session, extending from 15 to 20 minutes. This means a saving of some 80 minutes per week on the time generally allotted for that subject in similar classes taught under ordinary conditions. The time thus saved is added to the time allotted for reading. One of the most important features of the scheme is that part which insists on an explanation of the methods adopted being elicited from the children. After a problem has been set and the answer obtained, all the various methods by which the different children have obtained the answer are stated orally by the children themselves and the best methods discussed. Where an incorrect answer is given which obviously points to the use of a wrong method, that method is elicited from the child.

It is always found that the most effective teaching can be done when the teacher realises the errors into which pupils have fallen. At first little stress is laid on the best methods, rather is variety of method encouraged. It has been found in practice that the children soon adopt the shortest and most practical method of securing the answer to a problem. Another important feature in the experiment is that no two problems of the same type are set in the same lesson. I am aware that to many teachers this may be quite unorthodox, but in my opinion the teaching of problems by means of types offers an inducement to a child to fall back on its memory. Of course, if the usual kind of result is aimed at, viz., a high average of correct sums at every stage of the child's career, the working of problems in sets and the memorising of types of problems is the easiest method of securing such results. If, however, the education of the child is the chief object in arithmetic, the aim should be the training and developing of the reasoning faculty, that is, making the child think clearly and systematically about the relation of number to number. Every precaution must be taken to prevent the child from memorising his methods of working problems. Teaching a particular kind of problem followed by a series of questions on that type is strictly avoided, because I consider that the child after working the first problem or two ceases to use his reasoning faculties, and falls back on his memory, the work becomes mechanical and the exercise loses all its educational value. In the teaching of arithmetic, more than of any other subject in the curriculum of an elementary school, the chief aim should be the careful training and development of the reasoning faculties rather than a mere acquaintance with and knowledge of processes. Accuracy, of course, must be aimed at, but the attempt to secure this too early in the child's life will lead to the defeat of the object the teacher has in view. Mechanical accuracy will be gained at the expense of intelligent accuracy.

I may at once deal with some of the chief objections raised to the plan of confining the arithmetic to mental work in the early stages. Some say that the strain on the teacher may be too great. That is obviated by the shortness of the lesson. Another objection is that if a child leaves school before reaching the upper classes he will leave without any knowledge of ordinary arithmetical rules. My reply to that is that he will be better

equipped for the calculations that he is likely to want in after life by the mental training he will have secured, than he would be under the old system of learning a few of the simpler rules in arithmetic, and he will certainly be better equipped to continue his study of the subject if he desires to do so. Another objection is that unless the teacher is very skilful some of the children may not be kept fully employed. Of course, the more skilful the teacher the better the work under any system, but I do not find it requires "a David with a sling" to teach effectively under the scheme I have outlined. Precautions are taken to see that every child is making progress, as neither the answers nor the questions are entirely confined to oral work. In certain lessons the answers to the problems are required to be written down and at other times the questions themselves are written on the black-board, not dictated by the teacher. In fact, experience has shown that there is very little danger from this point of view.

At the Fourth Standard, that is, normal children of the age of ten, the teaching of the definite rules is introduced—the first written work as distinguished from merely writing the answers to simple problems. We commence in the first lesson by teaching the principles of multiplication and addition of weights and measures, money and abstract quantities. Three problems such as the following are worked first by multiplication and then by addition:—

1. If I gave 3 lbs. 9 ozs. of sugar to each of 3 boys, what would they get altogether?
2. If I gave 3*s.* 9*d.* to each of 3 boys, how much would they get altogether?
3. If I gave 39 marbles to each of 3 boys, how many would they get altogether?

These three sums are set out side by side thus:—

lbs.	ozs.	<i>s.</i>	<i>d.</i>	<i>t.</i>	<i>u.</i>
3	9	3	9	3	9
	3		3		3
<hr/>		<hr/>		<hr/>	

The first sum worked would be that dealing with lbs. and ozs., then the one with money, and last, the one consisting of abstract numbers. By reference and comparison, the process of changing units, or ones, into tens is more easily realised than if the usual method were

adopted of starting with the abstract numbers. In dealing with the ozs. the children must realise the changing of one denomination to another, and also when dealing with the 27 pennies they realise they are changing into shillings; then when dealing with the 27 ones, or units, they fully realise they are changing them into tens. Having worked these three sums by multiplication they would then be set out in the form of addition and worked by addition. In this way in the first lesson the processes for addition and multiplication of weights and measures, money, and abstract numbers were taught, and by experience it was found possible that by the end of a week little difficulty was experienced by normal children in working for themselves simple sums of this character. Subtraction and short division would be taught in a similar manner. Throughout the whole of the work of teaching the processes, care was always taken to show that there was no difference in principle whether weights and measures, money, or ordinary numbers were used. It will be noticed that the usual order of teaching was reversed—the weights and measures were taken before the money, and the money before the ordinary abstract numbers, although practically all were taught together. In the early stages the simple rules were invariably taught in this triplicate form.

It must not be thought that the commencing of written work meant the cessation of mental work. Each lesson in written arithmetic is prefaced by at least 10 or 15 minutes of mental exercise preparing the way for subsequent lessons in the written exercises. Even in the written exercises themselves so long as the processes of solution of problems are clearly and definitely set out the actual work is, as far as possible, performed mentally. Much care, however, is taken to see that all problems are set out in an orderly manner. Correct answers are not accepted unless the steps by which they are arrived at are clearly shown. During the period when only mental work is taken, the setting of the solution in a logical manner is frequently practised. At times the solutions are set out on the blackboard at the dictation of the children, at others the children set out the solution on their papers. The use of diagrams in connection with solutions is encouraged. Problems involving long arithmetical calculations are rarely introduced. It has been found that the practice of setting long sums has many drawbacks and few advantages, if any. It gives the

pupil a distaste for the subject and does not, as is often erroneously supposed, improve accuracy. In each term the course for the year is, as a rule, covered more than once so far as practice in the different sections of the work is concerned. At first the problems are easy; they are gradually increased in difficulty. By these continual changes the faculties of the pupils are better developed and the evil of memorising processes is avoided. Instead of learning types of sums and applying the process to similar ones, the pupil more readily understands the principles involved in the solution of the problems, and is able to apply them in a rational manner.

The greatest difficulty for teachers in a scheme of this character is that at present there is no text-book which sets out the problems in the order in which it has been found desirable to take them. To a certain extent we have got over this difficulty by supplying each class with several sets of books containing arithmetical examples. The teacher judiciously selects the sums which the children should take. In the lower classes each master is supplied with several complete sets of arithmetic books, and from these he, to a large extent, selects the examples which he gives to his pupils, altering the numbers involved and the transactions set out to meet the capacity of the children he is teaching. By this means a great variety of examples is obtained, and the idea of the concentric system is maintained throughout the school.

Probably the simplest and most illuminating definition of my scheme, so far as it applied to the lower standards, was that given by one of the boys themselves, a lad of nine, who, on leaving the school and seeking admission to another, when asked by the headmaster what arithmetic he did at his previous school said, "Oh, we did not do any arithmetic there, we only talked about it."

Another description was that given in the early stages of the experiment by one of His Majesty's Inspectors who came unofficially to see the working of the scheme. He said: "We have long debated how much time should be devoted to mental and how much to written arithmetic. You have cut the Gordian knot by striking out written arithmetic altogether. We have been floundering from teaching by or simplifying Scheme A., then introducing Scheme B., every alteration tending in the direction you have taken, but we seem to shy at taking your full plunge. Yours is Scheme B., only more so." I may explain that Scheme A. was a rigid system of

teaching arithmetic in compartments in the different standards, and mostly dealing with abstract rather than concrete quantities. Scheme B. also provided for the teaching of arithmetic in water-tight compartments, but allowed more rules to be taken at each stage, only simpler numbers and more concrete examples were to be used.

It may interest the Conference to learn what was the official view of this experiment. From time to time His Majesty's Inspectors reported on the subject. The delightfully cautious manner in which they expressed themselves is worth noticing. The reports were, in most cases, from different Inspectors:—

February 1903.—“An interesting experiment is being
“tried in the teaching of reading and arithmetic in
“the lower standards.”

February 1904.—“The success of the headmaster's
“experiment of abolishing written work in arith-
“metical teaching of the three lower standards has
“yet to be proved.”

September 1904.—“The work of this school, which in
“some respects is conducted on unusual lines,
“appears to be going on very successfully.”

February 1905.—“The alertness, intelligence, and
“general mental habits of the older boys go far
“to justify the somewhat exceptional methods
“employed in the training of the younger children.”

February 1906.—“The original methods adopted in
“this school have had marked success during the
“past year.”

In 1907, when a cycle in the scheme had been completed, the Chief Inspector for London and two of his colleagues made a thorough investigation into the working of the scheme, and on the arithmetic reported as follows:—

“In arithmetic no written work is done below Standard IV., except to put down the answers arrived at from mental solution of questions in concrete arithmetic placed on the board, from which the boys proceed to abstract numbers. Provided that the more indolent boys receive sufficient attention, this must induce the habit of mental alertness and of intelligent conception. As a matter of fact, it was found that while careless mistakes were often made, the boys showed unusual intelligence in

working sums, and could reason out an approximate answer very readily, and this intelligence is manifested in the written work of the upper standards, and it results in the saving of 85 minutes a week."

I may say the more indolent boys do not escape notice, as much of the mental work, as I have already stated, consists in putting answers on paper. It is true in the Fourth, and even in the Fifth Standards, slips are made, or what the Inspector calls careless mistakes, especially in the early part of the year's work, but in practice it is found that by the end of the educational year the accuracy is even better than under the old system, and I find the boys in the Sixth and Seventh Standards are accurate throughout the year. Not only is this so, but marginal work is rarely practised by the boys in working the more complex processes. In addition to securing the teaching of arithmetic on more rational lines, the experiment set free more than 80 minutes a week in the three lower classes of the school, and this time was devoted to reading with most beneficial results. Even in the matter of arithmetic this extra time devoted to reading is most useful, for the children read and understand the problems much more readily than in the old days when reading was reading and nothing more, and arithmetic was arithmetic and arithmetic alone.

PRACTICAL EDUCATION IN ELEMENTARY SCHOOLS.

By James G. Legge.

How is it that public opinion of recent years has grown uneasy over the question of our Education—our bookish education? This is the first question we have to consider, for it is a question agitating new countries as well as old, the young Dominions as well as the time-worn Mother-country of them all, and some answer to it is essential to the argument of this paper. The explanation I venture to submit runs briefly as follows. Of old, where and so long as domestic arts and crafts existed, education was as much the work of the home as of the school. In the schoolroom, or the school-house, even though the latter were but a barn or a hovel, the child learnt the literary and numerical elements of its education, reading, writing, and arithmetic; at home, the child watched its father or its mother at work, and, if only at play, exercised its little fingers in imitation of what it saw them doing. And processes were simple: without much formal explanation,

the child imbibed slowly and unconsciously a knowledge, none the less real to it, because it could not define it, of the principles underlying these simple processes. But after the Industrial Revolution, after the discovery and the application of steam-power, came the factory system; the hearth grew cold, and the home-side of education faded away. There followed the horrors of bare unabashed industrialism in our growing towns, horrors familiar to those who have studied the early history of the Ragged School Movement, or who know their Dickens, and have read Disraeli's "Sybil," when children ran wild with neither home nor school, or, hardly out of infancy, were swept into factory, or mill, like animals, to serve their elders through long hours of joyless, soul-destroying, body-stunting drudgery. Then came the Factory Acts, and, late in the nineteenth century, after years of noble voluntary effort on the part of the Churches, and no less admirable exertion on the part of lay philanthropy, an Act establishing compulsory education, which swept the children from the streets into school, and while not clearing the factory and mill altogether of young children shortened the hours of child-labour, and compensated the child for some loss of manual drudgery, by providing it with equivalent drudgery of another sort.

It was natural, when a universal school system was thus established, that the school should take up that side of education, which had always been recognised as its province, viz., the literary and numerical, and that developments called for almost at once should be on literary lines, a smattering of history and geography and some tincture of pure literary culture. A dash of science was early introduced, largely through the influence of the great Triumvirate, Huxley, Tyndall, and Spencer, whose writings and speeches spread some hazy idea that scientific fact was the same as moral truth, a scientific experiment more than the equivalent of a logical syllogism, and the book of nature quite as reliable a guide to conduct as the Bible.

Even then something was soon felt to be wrong. The curriculum was lop-sided; those pulling at the educational oar experienced something of the discomfort of rowing in a badly balanced boat. The first idea that occurred to people was to restore the balance by introducing as make-weights subjects of another kind, manual not mental. It was impossible that a man or woman working in a slum school should fail to recognise the

incongruity of teaching ragged, hatless, unshod, even verminous children, stocks and shares, history and geography, and literature, without some effort to place in their possession the means of leading a clean and decent life, and of enjoying a modicum of wholesome leisure. Needlework and cookery and laundry-work had irresistible claims for girls: for no pedagogic purist was ever so petrified in pedantry but in his heart of hearts believed that a girl could not begin too young to learn how to sew on his buttons, boil his potatoes, and wash his shirts. And manual instruction seemed right enough for boys.

With this we were for a time content. But a new fermentation of ideas set in, the result of three different leavens. First, the history of educational science as developed in Switzerland and Germany led us to doubt whether manual instruction and manipulative exercises were to be rightly regarded as additional subjects, and their inclusion in the school curriculum justified on the ground that they were, so to speak, counter-irritants to book-work. It began to dawn on us that manual instruction was a new method, and the right method of applying the now universally accepted principles of Pestalozzi, principles derived perhaps from Rousseau, but only brought to full fruition by Froebel and Herbart and the followers of Herbart. Since then how strenuous have been our efforts to show that any amount of manual work can be introduced into a school not as a new subject but as a new method!

Second, the study of education as an applied art became but a branch of a wider sociological study. We began to take stock of the school not only in itself but in its relation to life; we sought to find out its place in the scheme of things; how it fitted in with the organisation of society as it exists at the time. This inquiry brought to light the fact that a whole side of education had been gradually fading away, the home side, and despairing, perhaps too soon, of ever recovering it we are rushing in where angels might hesitate with proposals for feeding and clothing, medically treating, and apprenticing. After the child is officially taught, officially fed, officially clothed, and officially placed in employment, there but remains the prime condition, to which Eugenics is already pointing the finger, that he shall be officially begotten.

Third, in the service of child study were enlisted physiologists as well as psychologists, with the result

that experimental psychology began a series of fruitful discoveries, culminating in these :—(A) To quote words of C. G. Leland, the American, and author of the Hans Breitmann ballads, who presents to us the almost unique example of a man who doubled the *rôles* of humorist and educationist, and yet did not, more's the pity, relieve the one with the other, "from 7 to 14 years of age a " certain suppleness, knack, or dexterous familiarity with " the pencil or any implement may be acquired which " diminishes with succeeding years." Hence in practical education the need for beginning a stage earlier than the vocational school as understood in the United States and in Germany. Trade Schools, or Vocational Schools, or Pre-apprenticeship Schools are regarded by some as the hope of the future, the phoenix rising out of the ashes of the dead apprenticeship system which will give the adolescent a finer technical training than Dick Whittington or Hogarth's Industrious Apprentice got from their individual Masters in the past. But we must pave the way for the vocational school, whether that school be a classical high school, or a commercial school, or a trade school, or a farm school. "The cry to-day is for more " practical instruction, and we fail to see why hand-skill " should not precede trade training just as mental " training a literary or scientific career": so says the " Schools and Teachers' Bulletin " issued by the Ontario Agricultural College—a quotation I draw from the admirable report for 1909 of Mr. A. H. Leake, Inspector of Technical Education for the Province. The case may be put even stronger on the physiological principle enunciated above; hand training *must* precede trade training if dexterity is to attain perfection in maturity.

(B) To quote a useful though perhaps rather crudely expressed passage in the Board of Education's Syllabus of Physical Exercises "there are in the brain certain " centres or masses of brain-matter which preside over " co-ordinated movements of all kinds. These centres " begin to perform their functions in early life, when the " child learns to stand, to walk, or to talk. As new " movements are attempted, new centres become active, " certain nerve impulses become more or less habitual, " and thus new nerve paths are opened up and estab- " lished, and the connections between the centres in " different parts of the brain become increasingly well- " defined and co-related. It has been found that within " reasonable limits the greater the scope of the physical " education, the more complex and highly specialised and

“developed do these centres become.” To which should be added that among the most elaborate of physical exercises are those which find their expression in schemes of manual instruction.

In support of this truth, viz., that manipulative exercises give an intellectual stimulus, a mass of evidence is rapidly accumulating as the circle of teachers interested in the experiment widens, and in a scientific spirit they take stock of results. The most striking demonstration that can be given is the aspect of the kitchen or workshop of a Special School whose mentally defective children are having their practical turn. A visitor will ask, are these children really the mentally defective section? Have you not inadvertently introduced me to children who are only physically defective? Dr. James W. Robertson, late Principal of Macdonald College, Canada, dismissing psychological subtleties of language, has well summed up the matter: “manual training . . . is the general culture of the powers of the body, “and of the mind through the activities of the body. “. . . . It is a training in accuracy, in ability to “control self and environment, in expression of thought “in deeds and substances rather than in language.”

Thus have we established at last the firm basis for our claim that manipulative exercises shall find a place in our elementary school curriculum. It is a three-fold basis, the foundations of which have been well and truly laid after the researches of many an earnest student into studies which can be characterised in terms of suitable gravity, studies historical, studies sociological, and studies psycho-physiological. Henceforward, when we are preaching the doctrine of practical education and are met by the exasperating question “why” we need not stammer or stutter, but may composedly answer: “For six reasons—

- “(i) to develop certain centres of the brain;
- “(ii) to develop manual dexterity at the age when it must be developed if it is to reach the pitch it should in maturer years;
- “(iii) to afford scope for the constructive faculties, or, if the term ‘faculties’ be objected to, to afford scope for self expression through the exercise of the motor activities;

- “(iv) to make school subjects more real to the child, in other words to bring into relation with every possible subject in the curriculum the third dimension ;
- “(v) to keep the child in touch with its environment, with what life means to *it*, not to some imaginary child brought up in an atmosphere of late-Victorian culture ;
- “(vi) to give it something to do which it recognises as definitely useful, and thereby to implant the germ of the idea of usefulness, the fruit of which is social service, the very condition of the existence of civilised society.”

If we have all these purposes in view when we call for the introduction of manual work, it is vain to seek for one scheme, one kind of material, one tool or set of tools which will accomplish all. True, we cannot devise any scheme which will not satisfy at least three requirements, for the first two, the development of brain centres and of manual dexterity, will be bound up with every imaginable scheme. But the common-sense conclusions seem to be these—

- (a) we need several sets of exercises in different materials, each devised to carry out one main purpose in chief ;
- (b) the main purposes on which stress will be laid will differ (i) in different schools, (ii) at different ages, and, if the school be large enough, (iii) with different children of the same age ;
- (c) the time to be devoted to manual work will differ at different ages and in different schools, the limit of the manual side in any case being the point at which it ceases to develop the all-round, intellectual as well as physical, development of the child.

These conclusions, it may be submitted, secure two essentials ; they afford infinite scope for the teacher, if he will only avail himself of the liberty offered him, and, properly applied, safeguard the individuality of the child. On the application of them I have not the time to dwell.* But a word of caution is necessary. In the application of our principles we must not forget that reading, writing and arithmetic, history, geography and the rest have still to be taught, and that much of the teaching of the past

* A few illustrations of Liverpool schemes in actual operation will be found in an Appendix (see pages 95–99).

was good and must persist. We are not to replace one cast-iron system by another. We are to modify method may be, but we are to have ample time for practice with the old-fashioned tools, reading-books, arithmetic-books, paper, pencil, and pen. Also, an additional word may be allowed in support of the sixth reason given by me above for the association of manual work with schools. By manual work, says Dr. Robertson, in his evidence before a Committee of the Canadian House of Commons in 1903, a boy "is taught to think clearly towards an end believed by him to be useful." It is to be doubted whether enough "useful work" finds its place even in the curriculum of our more progressive schools. A course of geometrical models in cardboard is good no doubt and useful; but the main purpose subserved is geometry. The making of apparatus for science-teaching or of models to illustrate history and geography lessons, or for use in the infants' school, is also good, and useful at the same time. But far more directly is the idea of utility served if the child is encouraged to make something for its own use or the use of its home. It is difficult to imagine work more educational for a boy in a slum school than the mending of his own breeches, socks or boots. He will be dull indeed if on his consciousness does not dawn after the idea of usefulness to himself that of usefulness to his mother, and to others about him. It will do the boy good to give him a turn once a week in the Girls' Domestic Centre, as it will do the girl good to set her to work once a week with hammer and nail in the boys' workshop. I venture to lay stress upon this point of usefulness, because the possibility of implanting even in germ the idea of social service seems to me a valuable addition to the list of virtues ascribed to manual training by Professor William James, of Harvard, kindest and most human of philosophers. What he has said of the introduction of Manual Training Schools into the sphere of secondary education is equally true of the introduction of manipulative exercises into elementary schools. "The most colossal improvement which recent years have seen in secondary education lies in the introduction of the Manual Training Schools; not because they will give us a people more handy and practical for domestic life and better skilled in trades, but because they will give us citizens with an entirely different intellectual fibre. Laboratory work and shop work engender a habit of observation, a knowledge of

“ the difference between accuracy and vagueness, and an
“ insight into nature’s complexity and into the in-
“ adequacy of all abstract verbal accounts of real
“ phenomena, which once wrought into the mind remain
“ there as life-long possessions. They confer precision;
“ because, if you are *doing* a thing, you must do it
“ definitely right or definitely wrong. They give honesty;
“ for, when you express yourself by making things, not
“ by using words, it becomes impossible to dissimulate
“ your vagueness or ignorance by ambiguity. They
“ beget a habit of self-reliance; they keep the interest
“ and attention always cheerfully engaged, and reduce
“ the teacher’s disciplinary functions to a minimum.”

I have given an analysis into six reasons of the motive for the introduction of manual work into elementary schools. Analysis is all very well in its way, but having picked a thing to pieces it is sometimes well that we should endeavour to put it together again. In winding up this argument, what can be done in the way of synthesis ?

This I shall attempt indirectly and by way of question. There was current at Oxford years ago the story of a youth to whom was put the question in *vivâ voce* examination, “ Can you give the names of the Major and the Minor Prophets ? ” He was floored for a moment, but recovered himself, and replied in deferential tones, “ Far be it from me to draw invidious distinctions between “ these holy men ! ” Let us put such a question to ourselves and inquire what are the major and the minor profits of Manual Training, and let us not scruple to pick and choose from among the six reasons given above, and to group them if they lend themselves to such treatment.

Taken together they represent the great goal of education, the all-round development of the child, the development of the child’s individual self, body, brain, and soul, to such a manhood as may be expected under the conditions of its being to be appropriate to it. But I confess that the six reasons seem to me to fall into two groups, of which one is higher than the other. Three reasons fall into the first group, namely, (1) the encouragement through motor activity of self expression on the part of the child, (2) the keeping of the child in touch with its environment, with what life means to *it*, and (3) the development of the idea of usefulness. Far below these are to be rated the other three, namely,

the cult of the intellectual powers, and of manual dexterity, and improvement in methods of teaching. The former are the weightier matters of the law, the latter but the tithe of mint, anise, and cummin.

APPENDIX.

It should be understood that in Liverpool there is no one scheme of manual or practical work in force. It is open to any Head Teacher to submit his own scheme. Such progress as has been made is largely due to individual initiative and ingenuity. The following are specimens of various schemes actually at work in different schools, but it should be stated that the Education Committee is prepared, experimentally and in appropriate districts, to go further than any of the schemes here represented. A new school has just been completed which contains ample workshop accommodation, and also a large domestic centre, and in this school the curriculum will be so arranged that the older children (*i.e.*, children over 12) will spend half-time in the workshop and half-time in the class room; the intellectual and other elements of the curriculum being dove-tailed into one another.

SCHOOL A.—Boys : Accommodation, 373.

Time.—Standards I. to IV. - Two lessons weekly of $1\frac{1}{2}$ hours each.

„ V. to VII. - Two afternoons = $4\frac{1}{2}$ hours weekly.

Forms of Expression.

Aims and Details of Course.

- | | |
|--|--|
| Clay.—Standards I. to IV. | - Used as an aid to the teaching of drawing and for illustration of the history and geography lessons. |
| Raffia.—Standards I. to III. | - Making of bags and useful objects. |
| String.—Standards I. to III. | - Training in the various knots, making of bags, curtain binders, hammocks, &c. |
| Cane.—Standards III. to IV. | - Leading to advanced basketry. School waste-paper baskets and domestic articles. |
| Cardboard.—Standards III. to IV. | - Leading to bookbinding, mending of school books, register cases, &c. |
| Light woodwork, with knife and fret saw.—Standards V. to VI. | - Special technical exercises are followed by the making of useful common objects for home and school, and the making of toys such as carts and horses. (A complete menagerie is being made involving advanced constructive work.) |
| Heavy woodwork.*—Standards VI. and VII. | - Practice in the use of tools followed by the construction of useful objects for home and school; stands for objects used in drawing lesson; brackets; bookshelves, pen stands, &c. |

* NOTE.—The benches in use have been converted from disused and obsolete school desks by teacher and boys.

General aim :—

- (a) To exercise younger children in as great a variety of materials as possible.
- (b) To develop the handwork on useful and practical lines.

SCHOOL B.—Mixed ; Accommodation, 850.

*Forms of Expression.**Aims and Details of Course.*

Clay modelling.—Standards I. to VII.	25 minutes weekly. Standards I. and II ; 60 minutes III. and IV. ; natural and common objects are modelled in the lower Standards. Later the work becomes illustrative of history and geography. Wax is used for composite models with wood and cardboard.
Raffia and cane weaving.—Standard I.	25 minutes weekly. Making of common objects of a useful kind ; bags, &c.
Paper cutting and modelling.—Standards I. and II.	20 minutes weekly. Simple exercises leading up to the cardboard work (Scissors used in Standard I., knives in Standard II.).
Cardboard modelling. — Standards III. to VII.	One hour weekly. Making of envelopes, blotter, gliders, bi-planes, &c. Communal work practised, boys in groups for making portions of a ship, a castle, &c. The history of ship-building illustrated by models (other materials used in combination with cardboard) ; also development of modes of conveyance, mediæval utensils, and other representations of social life historically treated.
Light woodwork (with knife). —Standards III. to V.	2 hours weekly. From the making of simple objects to the construction of more complex articles.
Heavy woodwork.—Standards V. to VII.	2½ hours weekly. A model is made by the teacher, the boys make a drawing which they take home, they are allowed a week during which they are expected to draw a different design, which would serve the same purpose as the teacher's model.
Metal work.—Standards VI. and VII.	Construction of common objects, vice clamps, bill files, picture hooks, wall staples, box-opener, blackboard hook for school use.

*General aim :—*To make objects in one lesson lead to construction of others in subsequent lessons.

NOTE.—All handwork is done on the school premises.

SCHOOL C.—Mixed ; accommodation, 236.

- Models in paper and card-board—Standards I. to IV. 50 minutes weekly. As an aid to the teaching of arithmetic.
- Clay Modelling—Standard V. 50 minutes weekly. Modelling of simple objects afterwards used for drawing.
- Heavy woodwork at Manual Centre.—Standards VI. to VII. Two hours weekly.

Special Domestic Course for Boys, some of whom become Sailors.

Needlework (leading to mending, 50 minutes in each Standard) :—

- Standard I. - - - - Holding needle, threading, thimble drill.
- „ II. - - - - Tacking and running on cloth.
- „ III. - - - - Turning down a hem and hemming.
- „ IV. - - - - Fixing and seaming. Plain knitting (wooden needles). Making of winter scarves and mittens.
- „ V. - - - - Sewing on buttons, button-holing, knitting (steel needles), knitting of socks and stockings.
- Standards VI. and VII. - Rough patching with cloth, darning stockings, mending of garments brought from their homes.

Cookery (60 minutes weekly) :—

- Standards VI. and VII. - Breadmaking.
Irish stew.
Making of tea, coffee, and cocoa.
Breakfast dishes (porridge, eggs and bacon, poached eggs).
Toad-in-the-hole.
Frying chops and steaks.
Boiling vegetables.
Milk puddings.

NOTE.—Scheme provides handwork of a practical kind with moral training of an indirect but eminently profitable nature.

SCHOOL D.—Boys ; accommodation 590.

Standard II. :—

- (a) Paper cutting, folding, mounting and model making (with scissors). One hour weekly. (1) For illustration of arithmetical rules and calculations. (2) Original constructive exercises.
- (b) Plastic work in sand, clay and putty. $\frac{3}{4}$ hour weekly. All the observation lessons specially illustrated by these media.

Standards III. and IV. :—

- (a) Cardboard modelling, light woodwork with knife and fret saw. 1 hour 10 minutes. All the observation, historical and geographical lessons, together with elementary science lessons given by aid of these.
- (b) Plastic work in clay and putty—sand building. $\frac{3}{4}$ hour. Objects used for drawing.
- (c) Paper (for teaching of arithmetic).

Standards V. to VII.* :—

- (a) Paper and cardboard (for $\frac{3}{4}$ hour. (1) Making of objects in cardboard and wood to illustrate the teaching arithmetic).
 (b) Heavier woodwork 2 hours (at Centre). (2) Groups of boys co-operate in making relief maps, bridges, docks and similar models.

NOTE 1.—Much work is performed at home from suggestions, measurements and drawings given in school. Parents are much interested and helpful.

NOTE 2.—The boys provide their own material for general work in wood. Their main supply is derived from neighbouring tradesmen, who give boxes.

SCHOOL E.—Mixed ; accommodation, 573.

- Paper mounting and modelling 2 hours weekly. Making common objects.
 —Standards I. to III.
 Claymodelling.—Standard III. $\frac{3}{4}$ hour alternate weeks. Illustrative of nature study and adjunct to drawing.
 Claymodelling.—Standards IV. to VII. 1 hour weekly. For the teaching of drawing and the making of illustrative models for geography and history. No set models.
 Cardboard modelling.—Standard IV. 2 hours weekly. After a few set exercises the work is purely illustrative.
 Light woodwork (with knife). 2 hours weekly. Making of historical and geographical models. Maps, weapons, modes of conveyance, ship-building, domestic lives of other nations illustrated.
 Some clay.—Standard V.
 Heavy woodwork (at Centre). 2 hours weekly. Besides set exercises in the use of tools, the instructor collaborates with school in making of illustrative geographical models of an elaborate kind, *e.g.*, African boats, furniture and ornaments.
 —Standards VI. to VII.

General Aim.—To make handwork an agent for the more vivid teaching of history and geography. Visits with teacher are paid to principal museums regularly.

FORMS OF HANDWORK TO BE FOUND IN THE LIVERPOOL SCHOOLS.

Paper :—

- (1) Cutting, folding, mounting, model-making.
- (2) Free cutting with the scissors.

Cardboard : Model-making.

Clay, putty, and wax : Modelling.

Sand-building.

Flower-making.

Bookbinding.

Bead work.

Weaving in raffia, cane, and string.

* It is impossible to supply the exact time devoted by the upper Standards to all forms of handwork. The general tendency is to introduce handwork into all lessons where advisable.

Rug-making.
 Netting, knotting, and plaiting.
 Upholstery.
 Linoleum cutting and printing.
 Glass work : Making scientific apparatus.
 Repoussé (metal) work.
 Woodwork (with knife).
 " (with fret-saw).
 " (with carpenter's tools).
 Toy-making.
 Chip-carving.
 Marquetry.
 Knitting, sewing, and clothes mending (for boys).
 Cookery (for boys).
 " (for girls).
 Laundry-work.
 Housewifery.
 Needlework, for girls.
 Dressmaking.
 Shoemaking and cobbling.
 Tailoring.
 Bent iron and other metal work.
 Gardening (in a few schools favourably situated).

SUMMARY OF THE DISCUSSION.

Mr. CECIL ANDREWS (Western Australia) said that he particularly welcomed the first paper because of the fact that it was a real experiment in education, being the work of a man who had left the ruts of tradition and had struck out a path for himself. It was a proof that such things were now possible, although the time is not so very long passed when the teacher had not the power and the latitude to strike out a line for himself in any way. He thought that it was an experiment in degree rather than in kind. All had been working very much in the same direction, but Mr. Jackman had taken a bigger step. All teachers had felt the pressure of the crowded curriculum and had realised that the amount of time given to arithmetic prevented them from giving to English that fuller treatment which it deserved. Mr. Andrews thought that Mr. Jackman's aim and practice might be taken as applying very largely to the schools in Western Australia.

Three points were particularly emphasised by Mr. Jackman: (1) that the terms used in the problems should be familiar to the children; (2) that the problems should deal with transactions which the children could readily grasp; and (3) that no problem should be set which

could not be solved mentally. Mr. Andrews accepted the first two points fully, but differed from Mr. Jackman on the third. He gathered from Mr. Jackman's paper that his was still a voice crying in the wilderness, and that his method had not been generally adopted, and he was therefore anxious to discover why that was so. He suggested that when an experiment was carried out in a single school there was often a possibility of the result being rated a little too highly owing to the special qualifications of the teacher, who in a case of this kind is usually an enthusiast who can infect his staff with his own enthusiasm. He suggested the desirability of what in science would be called a "control experiment," in which all the conditions are exactly the same with the exception of that one essential condition that is being tested. In the same way he would like to see the present experiment applied to a great many other schools where the head masters were not such great enthusiasts.

Turning to Mr. Legge's paper Mr. Andrews said that he thought there would be no doubt about agreement with the whole of it. He was particularly anxious during his present visit to England to see the way in which these ideas were being carried out. In the larger schools in Western Australia they had a great deal of manual work; practically all the older boys are getting a full course in woodwork, while the older girls are taking domestic science. He wished to lay particular emphasis on the necessity of the work done being useful, not using the term "usefulness" in the wide sense employed by Mr. Legge, who meant by it social service, but rather implying by it something which the children themselves would recognise as useful for their own particular ends.

In conclusion, Mr. Andrews said that he had listened with great interest to both the papers and was extremely glad to have had the opportunity of hearing them.

Mr. H. ARTHUR NESBITT (Teachers Guild) spoke very appreciatively of Mr. Jackman's paper. He fully agreed that arithmetic in the lower classes should be entirely confined to mental work. With regard to accuracy, he felt that the great means of securing this was the habit of verification. The children should have the habit of always trying to make a rough estimate as to whether the answer to their questions was about what they might expect. Too great stress, however, might be laid upon accuracy, which is largely obtained simply by practice and in no other way. Mr. Nesbitt said that he

had recently had occasion to go round to the different schools to see what they were doing and was surprised at the vast improvement which had followed the abolition of the payment of grants by results.

Lieut.-Colonel G. T. PLUNKETT (late Director of the Dublin Museum) said that in the year 1900 he had inspected and made a report on certain schools at Rouen, in France, and had there noticed one or two very remarkable things. The schools he had inspected were the *École Professionnelle* and the *École Pratique d'Industrie*. The point which he particularly wished to impress was that the boys in these schools were middle-class boys of the professional and commercial classes and not of the superior artisan class. He found that they easily held their own in literary work in competition with other schools, while at the same time, at the end of their three years' or four years' course they were exceedingly well taught in their manual subjects. Although perhaps they might not have gone quite so far in some books as boys from other schools, on the whole they were quite as intelligent and as well educated.

Mr. J. V. THOMPSON (Fiji) explained the difficulties which beset him in his work in Fiji. The youthful Fijian delights in exercise books in which in his spare time he writes out the arithmetic examples which he has worked out in class on his slate. He can work out 40 examples in simple interest in class, copy them into his book, and a week later he will be quite unable to do a similar example. When working his examples he mechanically acquires the fact that the sum invested and the rate of interest are written at the top, and the figure 100 at the bottom. A week later he will very likely reverse the position of the figures. Mr. Thompson stated that to fight this mechanical working he had adopted a system very like Mr. Marshall Jackman's. His great difficulty was to induce the native masters to abandon written work; they delighted in setting their class an enormous division sum, knowing that would give them a most restful half-hour while the class was working it out. Mr. Jackman might know that his system would be taken to the most distant corner of the Empire and used on savages.

Mr. W. W. SAWTELL (Headmaster of the Uxbridge County School) wished to ask Mr. Legge two questions: (1) whether he had found that ambidexterity induced

increased mental capacity, and (2) whether he found the usefulness of manual work more highly developed in co-educational schools than in separate schools. He illustrated the possibility of co-operation in manual work between boys and girls in mixed schools from his own experience at Uxbridge.

Mr. HAROLD GORST gathered from Mr. Legge's paper that he believed that a general education, diversified with manual training, and so on, was a satisfactory method of educating children in the elementary schools. Mr. Gorst had himself been subjected to this process of general education in two countries, England and Germany. From his experience he should say that the English system was cruelty to human beings, and that the German system was cruelty to animals. He has no doubt that everyone was agreed that the object of education was the development of individuality. The first step then should be to find out what is the capability of the child. He complained that he had not heard a single word from any one suggesting that the education in the elementary schools should be experimental in the direction of finding out the child's capabilities, and suggested that the only way in which education could be made experimental was by sweeping away the system of elementary schools for general education and substituting a system of workshops. He illustrated his argument from a workshop school in Cairo where the system is to start by making the boy, for example, a blacksmith, and when he is interested in the acquirement of this trade to lead him on to the necessity of some general education by showing that arithmetic, and so on, will be necessary when he becomes a real blacksmith and has to submit accounts to his customers. Mr. Gorst held that this system did not prevent the literary genius from finding expression, whereas the system of general education smothered mechanical ability.

He then turned to the education of girls and stated that all the girls who are now being educated in the elementary schools of the Empire had one common destiny. They were the future mothers of the British nation. The education given to them at present is very unpractical and useless, so that when they are married and have homes of their own they have to be invaded by social workers to teach them their domestic duties. There is, at the present time, a particular reason why the education of girls should be given a domestic basis. Women are coming into our national affairs in a very

short time and the reason why they are wanted in national affairs is because they are the domestic experts of the nation. Before, therefore, they enjoy the full privileges of citizenship they should be prepared at school for that higher duty.

Mr. GEORGE FLETCHER (Department of Agriculture and Technical Instruction, Ireland) said that he had been closely connected with the introduction of manual work into Irish schools, and that by means of itinerant courses manual work had been introduced into almost every corner of Ireland. Most people would recognise that ever since the passing of the Elementary Education Acts, elementary education had been insufficiently practical. He criticised one of the reasons given by Mr. Legge for the introduction of manual training, namely, that it developed certain centres of the brain. Surely you could make out as good a case for cricket and almost any form of action. He ventured to suggest that there is to-day no need for advocacy of manual instruction. It is purely a question of ways and means. On this point he thought that the cause of practical education had been greatly hindered by an over-academic spirit. For a long time they had had to fight against the idea that if a thing was useful it was not educational. He was glad to say that now in the rural parts of Ireland they found it not inconsistent with their educational aims to allow children to make beehives, wheelbarrows, and the like.

Mr. MARSHALL JACKMAN, in replying on the discussion, said he thought he might tell Mr. Andrews that there were a good many teachers taking up his method of arithmetic teaching. The Board of Education were now welcoming experiments and he felt sure that if teachers would only take courage, their experiments would be welcomed all round. He had carried on his work in two schools and he found that in the new school, where he had now been for four years, the staff were just as enthusiastic as the staff of the other school had been.

Mr. LEGGE, in replying, said he would only mention one point as to what they had done in Liverpool. They had introduced clothes-mending for boys in poor schools. In one school a boy of the Seventh Standard had to be punished for cutting holes in his own trousers for the pleasure of mending them. On the questions of ambi-

dexterity and co-education, he said that he had himself been the victim of both and was dead against them. He thought it was admitted that scientific opinion, on the whole, was against ambidexterity. He complained that Mr. Gorst had not listened attentively to his or Mr. Marshall Jackman's paper; they were both of them full of experiment and reeking with the subject of safeguarding individuality.

In conclusion, he pointed out in connection with Mr. Gorst's theory of the common destiny for girls, that since the last census there had been added to the population of Glasgow 15,000 girls and 8,000 boys. Was Mr. Gorst an advocate of polygamy?

SECONDARY EDUCATION IN SCOTLAND.

By John Strong.

[*Appended is a diagram which shows the interconnections of the various stages of Scottish education, and the relation which secondary education (embracing approximately the period between the ages of 12 and 18) bears to the whole.*]

Development.—An idea of the present position of Scottish secondary education can be gained best by first examining its broad developments since the passing of the Education Act of 1872. Previous to this secondary education was quite without organisation. An attempt to remedy matters, however, was made then. Those schools in which the education given did not consist chiefly of elementary instruction were termed higher class schools, of which the burgh schools came under the management of the newly-created School Boards, while others, such as the endowed schools, remained under their former governors. But in accordance with Scottish tradition higher instruction was not limited to one class of schools. The Act decreed that the then existing standard of education should not be lowered, which meant that the elementary school should be allowed to give higher instruction as in former days. There was no provision for State-aid being given to the higher class school, although higher instruction in the elementary school, however meagre and scrappy it might be, was to be subsidised by grants under the Code. These distinctions gave rise to two movements the objects of which were (a) to obtain State-aid for higher class schools, and (b) to

maintain and develop higher instruction in elementary schools. The first was achieved by a series of grants, administered and applied without reference to the Code, and now consolidated in the Education (Scotland) Fund, while the second gave rise to one of the most difficult problems in Scottish education since the passing of the Act.

Each movement brought others in its train. State-aid to higher class schools has been followed by this important result, that these schools have gradually come under the supervision and to a large extent the control of the Scotch Education Department; while at the same time, in order to have responsible and effective local administration of Imperial subsidies, Burgh and County Secondary Education Committees were created. The chief results of the second movement have been the evolution of a school of a new type—the higher grade school—receiving grants under the Code, and the establishment in almost every part of the country of a broadly-conceived curriculum of higher instruction. As the Department had practically absolute control of the instruction in the elementary school, experiments in the way of a curriculum of higher instruction were first tried in it. When a satisfactory scheme had been evolved it was tentatively applied to the higher class school and gradually grafted upon it by means of two powerful instruments—a State-examination and State-aid—a knowledge of which is fundamental to an understanding of Scottish secondary education. The first we shall consider now; the second will perhaps be more clearly understood in connection with the various bodies administering it, and, in consequence, we shall deal with it under the heading of Administration.

State Examinations.—Under the name of the Leaving Certificate Examination the Department in 1888 instituted a State examination which was originally an examination in individual subjects of higher instruction without reference to a curriculum and confined to higher class schools. For a success in any subject a separate certificate was issued. Since then its character has greatly changed. At the present time the only certificates issued are of two classes—the Intermediate and the Leaving Certificate—and the conditions under which they are granted are such as to influence considerably the whole organisation and course of study in a secondary school. A candidate for an Intermediate Certificate must have completed an

intermediate course, the entry to which is guarded by the Qualifying Examination which guarantees a certain standard of attainment in elementary instruction. The intermediate course is defined as a well-balanced course of *general* education extending over three years and including in its range English, history, geography, mathematics (including arithmetic), at least one language other than English, science, and drawing. Towards the end of the course candidates have to undergo a written and oral examination in these subjects, in which excellence in one subject may, to a certain extent, compensate for deficiency in another. The normal age at which a pupil may enter for the Intermediate Certificate is fifteen. A distinctive feature, and one analogous to the Prussian *Abiturientenexamen*, is the weight given by the Department to the teachers' opinions of the candidates as formed from their day by day observation. By this means it is sought, and in general successfully, to eliminate adventitious and accidental circumstances prejudicial to the candidates' interests.

The conditions under which the Leaving Certificate is granted are in process of revision. As the regulations stand, however, candidates must have passed through a post-intermediate course of study extending over at least two years and have reached the age of seventeen. In the written and oral examinations they have to pass in four subjects on what is called the higher grade standard; or, alternatively, in three subjects on the higher grade and two on the lower. Any particular group of passes must include higher English and higher or lower mathematics; the remaining passes may be science with one or more languages, or languages only. Thus the Leaving Certificate, like the Intermediate Certificate, is a *group* certificate having reference to a curriculum. The opinion of the head teacher is taken into account in estimating the value of a pupil's work, but for the present to a more limited extent than obtains in the case of the Intermediate Certificate.

In view of the revision of the conditions under which the Leaving Certificate will be granted in the future, the Department, a short time ago, invited the headmasters of the secondary schools to express their opinion upon the matter. Shorn of details, their proposals, while making provision for a general course, allow abundant opportunities for specialised courses, and it is highly probable that the contemplated changes will proceed on these lines.

But this raises a difficulty. In the opinion of the Department, and of educationists generally, the Leaving Certificate should link on the work of the secondary school to the degree courses in the University. For this to obtain, it is necessary that the University should accept the Leaving Certificate as equivalent to its preliminary or entrance examination. Until recently, however, it was hampered by ordinances, the alteration of which would have been a tedious matter. But recently changes have been made in them which promise to facilitate the necessary adjustments. One stumbling-block may be that, in the suggested Leaving Certificate Courses, Latin is optional. But even this difficulty, it is hoped, will be removed, and the certificate of a satisfactory completion of a secondary school course will, in ordinary circumstances, be the certificate of fitness to enter the University.

Certificates obtained under conditions such as these should have currency not only with the University but with other examining bodies, and to a large extent this holds good at the present time. But it is somewhat curious, and perhaps hardly defensible, that little recognition has been given to them by the Civil Service Commissioners. It seems to me that it would be a great gain to the public service and to secondary education generally if the possession of one or other of these certificates, or their equivalents in other parts of the Kingdom, was made obligatory upon all candidates for the Civil Service—particularly for the lower branches of it—before they were allowed to enter for any of its competitive examinations. At all events, the adoption of some such system would tend to remove some of the abuses which presently exist.

Before leaving the subject of the Leaving Certificate Examination it may be well to note that the intermediate course is a course of *general* education which means that progressive thought in Scotland takes it as a sound principle in secondary education to defer any but the slightest attempts at specialisation until the age of fifteen or sixteen, and, further, that a *general* education should make provision for languages on the one hand and for science and drawing on the other. Incidentally it may be stated that the encouragement given to the study of modern languages in recent years in Scotland has considerably raised the level of attainment in French and German, and the fostering of the teaching of experimental science has resulted in a great extension of

buildings and equipment for this purpose throughout the country. Two other points are worthy of note—(1) That the tendency of the examining body, the Department, is to give increasing weight to the opinion of the teacher in awarding these certificates, but that this presupposes a high type of secondary teacher both as regards character and attainments—a point we shall revert to later, and (2) that however much higher class schools and higher grade schools differ in their origin, and in the method in which they participate in State-aid, both types of schools meet on a common plane in the Leaving Certificate Examination.

So far as Scottish day schools are concerned, vocational courses, as the term is now used, are practically confined to pupils between the ages of twelve and fourteen, attending what are called supplementary courses in the elementary or primary schools. The Department, it is true, offers technical and commercial certificates for post-intermediate courses having relation to these branches, but, so far, very little advantage has been taken of the offer. This, I believe, is due to several reasons: partly to the very limited demand up to the present by secondary school pupils for work of this type, thus scarcely warranting the expenditure from local sources of the sums necessary to provide the additional equipment and staff; partly to the opinion which very generally prevails among secondary school managers and teachers that such provision is not one of the functions of a secondary school—though indications that this opinion is changing are not wanting; and partly to the excellent and extended facilities provided and in course of provision in the Continuation Classes throughout the country. As statistics show, by far the largest number of pupils receiving secondary instruction in Scotland leave school during or at the end of the intermediate course. It may be, and I am rather inclined to this opinion, that were facilities provided for thoroughly well-taught post-intermediate commercial and industrial courses these pupils would remain at the secondary school one or two years beyond the intermediate stage. But, as the past shows, Scottish local authorities would be slow to make experiments of this kind without guarantees of substantial assistance from Imperial funds.

Organisation.—It is now possible to describe in a few words the organisation of schools providing secondary education in Scotland. Those schools which make provision for secondary instruction up to the intermediate certificate

stage are termed intermediate schools, while those which offer in addition a post-intermediate course take the name secondary. In the former group are included most of the higher grade schools; the latter group comprises practically all higher class schools. Many higher grade schools, however, in that they provide a full five years' course, rank as secondary schools.

Since higher grade schools, whether ranking as intermediate or secondary, receive State-aid under the Code their school fees cannot exceed a certain sum specified in the Code. Any financial deficit is met by a subvention from the local rates. The extension and development of this type of school has been one of the outstanding successes in the evolution of Scottish secondary education. In 1900 there were 27 such schools, having an aggregate average attendance of 2,561 pupils; in 1909 these numbers had increased to 182 and 22,118 respectively—statistics which prove conclusively that they are not only playing an important function in disseminating higher instruction, but that they are immensely popular among the industrial classes of the community.

In general the higher class school charges somewhat higher fees than the higher grade school; but in some districts this distinction seems to be disappearing. In addition to fees, State-aid, and endowments (if any), higher class schools under School Boards may, by the Act of 1908, meet any deficit from the local rates, precisely as in the case of the higher grade school. Thus there is a gradual approximation of the two types of schools and it is quite certain that present distinctions, principally of historic import, will disappear in the near future. Higher class schools under managers other than School Boards comprise in the main the endowed schools. While under certain conditions they are eligible for State-aid they have no claim upon the local rates. Over and above these there are some private schools providing secondary education, but their numbers are insignificant as compared with those just enumerated, and they require no special consideration. It should be added, however, that so far as numbers are concerned the higher class school is practically stationary—a state of matters very different from what we have seen prevails in the case of the higher grade school.

Administration.—The administration of schools providing secondary instruction is threefold, involving (a) the Scotch Education Department, (b) Secondary Education

Committees, and (c) Local Managers, *i.e.*, School Boards or similar bodies. We shall give a brief account of the functions of each and then consider (d) the general policy.

(a) The Department, by its control of the Leaving Certificate Examinations and its virtual control of the grants for secondary education, has a great hold on the secondary school. It directly administers one of the most important grants—the secondary school *per capita* grant—under conditions which state that “the school must be open at all times to inspection at the instance of the Department, and the efficiency of the instruction and the proficiency of individual scholars will be judged by such tests (including oral examinations at the school and presentation at the Leaving Certificate Examination) as the Department may direct.” This inspection involves periodic visits to the schools by its inspectors. Thus it comes into direct touch with the daily working of the school. And as these inspectors are specialists in some one or other department of study, and pass from school to school, it is obvious that in addition to offering suggestions they come into immediate contact with any original experimental work which may be in progress. Not only are the curriculum, the buildings, and the equipment of the schools, subject to the approval of the Department, but also the qualifications of the teachers. It has virtually established a “Teachers’ Register,” which includes practically all teachers in Scotland who would have a good claim to registration in any circumstances, and guarantees are taken for the future in the high standard of attainment required of such teachers by the Regulations for the Training of Teachers. To the Department is entrusted the administration of the teachers’ superannuation scheme of the Act of 1908, which, it should be noted, applies to secondary teachers as well as to teachers in elementary schools.

(b) The Burgh and Secondary Education Committees are thirty-nine in number—one being elected for each of the thirty-nine districts into which the country is divided for this purpose. Each Committee comprises representatives of the School Boards, the Burgh or County Councils, and the various secondary or intermediate schools in its district, and in addition one of H.M. Inspectors, who thus links it to the Department. The function of these Committees is primarily that of co-ordinating the various agencies providing secondary education in their several

districts. When first constituted, their powers of initiative, in respect of the administration of the grants for secondary education, were large, but, since the sums at their command were frittered away upon desultory effort instead of being concentrated upon some definite and comprehensive scheme, they were gradually restricted. It is a curious fact in the history of Scottish education that Committees created primarily in the belief that they would take broad views regarding secondary education failed lamentably in this respect; seemingly they were not able to emerge from parochialism. By the Act of 1908, however, they have had responsibilities placed upon them which in a measure compensate for their former limitations. While they have no direct control in the management of the secondary or intermediate schools in their several districts, they act as intermediaries between the Department and such schools, and in many cases their knowledge of local conditions and circumstances is really valuable. One of their functions is to administer under the Department's approval a district bursary scheme. They may also, with the same approval, establish hostels for junior students, bursars, or other pupils attending intermediate or secondary schools.

It may be helpful at this stage to consider the administration of the Education (Scotland) Fund. In the provisions of the Act of 1908 for the distribution of this Fund, the principle is adopted of making national, as distinct from local, educational requirements first charges upon it, and among them are enumerated the cost of inspecting and examining secondary and intermediate schools, and the expenses in connection with the Leaving Certificate Examinations. The balance has then to be divided into thirty-nine district education funds—a district being the area for which a Secondary Education Committee is elected—in accordance with a scheme of distribution proposed by the Department and submitted to Parliament. Each district education fund must be kept separate from the others, but all are under the administration of the Department, by whom all payments, whether to School Boards, Committees, or other bodies, are made. With regard to these payments a principle is adopted similar to that applied in the case of the Education Fund; expenditure for general district purposes is put as a first charge. Two of these first charges have direct relation to district intermediate or secondary schools. Payment is authorised of a reasonable proportion of the expenditure

incurred by these schools in respect of pupils drawn from surrounding parishes, and also authority is given to make payment of a sum which varies according to the excess of the expenditure of such a school or schools over a definite local rate.

(c) Notwithstanding the powers exercised by the Department and the Secondary Education Committees, local managers of secondary or intermediate schools, whether School Boards or others, still remain the fundamental authority in respect of the schools in their educational area. They appoint the teachers and remunerate them, provide buildings and equipment, are responsible for the finances, propose curricula (within certain limits), and, indeed, as their name implies, *manage* the schools. Thus secondary education in Scotland is still largely parochial in its administration. Tradition up to the present has been effective in resisting direct control by a district authority. With a strong and progressive central authority, such as the Department in recent years has proved itself to be, it is a moot point whether larger areas for the administration of secondary education would have brought about so many advances as the last ten years show. The one danger is lest a central authority, wielding so much power, should become non-progressive and reactionary. Perhaps this is hardly possible in Scotland; at all events not while the present *régime* continues.

(d) The general policy—in which, as already indicated, the Department has taken the lead—has been (1) to concentrate secondary education in suitable centres, and at the same time, (2) to devise measures to safeguard the interests of pupils in outlying districts. The one has made it possible to raise considerably the standard of secondary education in the country, with its obvious corollaries, better school buildings and equipment, and more highly qualified teachers; while the other has made it necessary to introduce a national bursary system, and, occasionally, where that fails to meet local requirements, to recognise a kind of sub-intermediate school as qualified to give the earlier stages of an intermediate course. We shall consider these two points separately.

(1) It should be understood that there has been no undue forcing of these central schools. They have not been arbitrarily fixed, but have grown up gradually and naturally. By receiving grants on condition of providing suitable and modern premises and equipment, local

managers have been encouraged to draw freely upon their local resources. The extent to which some of these central schools have made provision for the highest branches of secondary work, and this, too, in districts which appeared to give little promise of success, is remarkable. While conserving the essential features of an educationally sound system, the Department has given every encouragement to them to develop on lines suitable to local requirements. In this connection it should be borne in mind that co-education is almost universal in the country, and that, consequently, one central school often provides in its post-intermediate courses, for specialisation along lines suitable for girls as well as for boys. This policy of centralisation will, in the long run, undoubtedly prove the most economical. Already the work of these schools is comparable with that in the Scottish Universities less than 20 years ago, and the average age at which a pupil leaves the secondary school for the University has risen by about two years.

Coincident with this advance in the standard of secondary education, a distinct advance has been made in the standard of the qualifications demanded of the teachers. For recognition as specially qualified teachers of particular subjects in intermediate and secondary schools, the honours' degree of an approved University in that subject, or its equivalent, is demanded; in addition, the applicant must have undergone an approved course of professional training, theoretical and practical, extending over at least one year, in which *inter alia* adequate instruction and practice in the methods of teaching the particular subject or subjects have been included. Provision for this professional training is made by the four recently instituted (1905) Provincial Committees for the Training of Teachers. The St. Andrews Committee, of which I have the honour of being a co-opted member, attaches great importance to this special work, and interesting developments, of which it is hardly possible to give details within the limits of this paper, are now in progress there. Finally, after serving a probationary year in an intermediate or secondary school and obtaining a satisfactory report from the principal teacher, the candidate may receive recognition from the Department. These requirements may seem to be pitched high, but they are practically being realised at the present moment. While in some respects this training of the secondary teacher is in an experimental stage, and

further developments are to be expected, there is no doubt that the system is actually producing a more highly qualified teacher.

At the same time as these regulations were issued (1906), the whole system of training teachers in Scotland was reorganised. The old pupil-teacher system was practically superseded by what is known as the junior student system, in which the secondary school plays an important part. More than 100 secondary schools, suitably situated for the purpose, have become junior student centres, each with its own master of method who supervises and directs the practical training of the students. A candidate for a junior studentship must hold the intermediate certificate and in the opinion of the headmaster of the school show some bent for teaching. The appointments are then made by the Secondary Education Committees in order of merit, the Department regulating the number of junior students to be appointed by each Committee yearly and in this way controlling the supply of teachers for the future. A junior student course extends over three years, and is simply a specialised course, of which the subjects and minimum time to be devoted to each is largely determined by the Department. To a limited extent the junior student may follow his bent towards a particular line of study. The scheme has many possibilities, and, in time, will no doubt settle down into a smooth-working and effective system. It is a good thing that the future teacher should not be segregated too early, but should work side by side with students who are to enter professions other than his own. In some centres, however, the number of junior students is relatively so great that this advantage is lost, and the school in its upper reaches tends to become a training ground for teachers only. Students of ability may so arrange their studies as to combine their junior student course with a course leading up to the Leaving Certificate, and thus at the end of three years obtain both certificates—the Junior Student Certificate, which enables them to enter upon a course of training under one of the Provincial Committees, and the Leaving Certificate which may give them entry to a degree course in the University. Furthermore, students who require financial assistance are given priority in the allocation of secondary bursaries by Secondary Education Committees.

(2) We turn now to the second point. A uniform bursary scheme on the lines broadly indicated by the

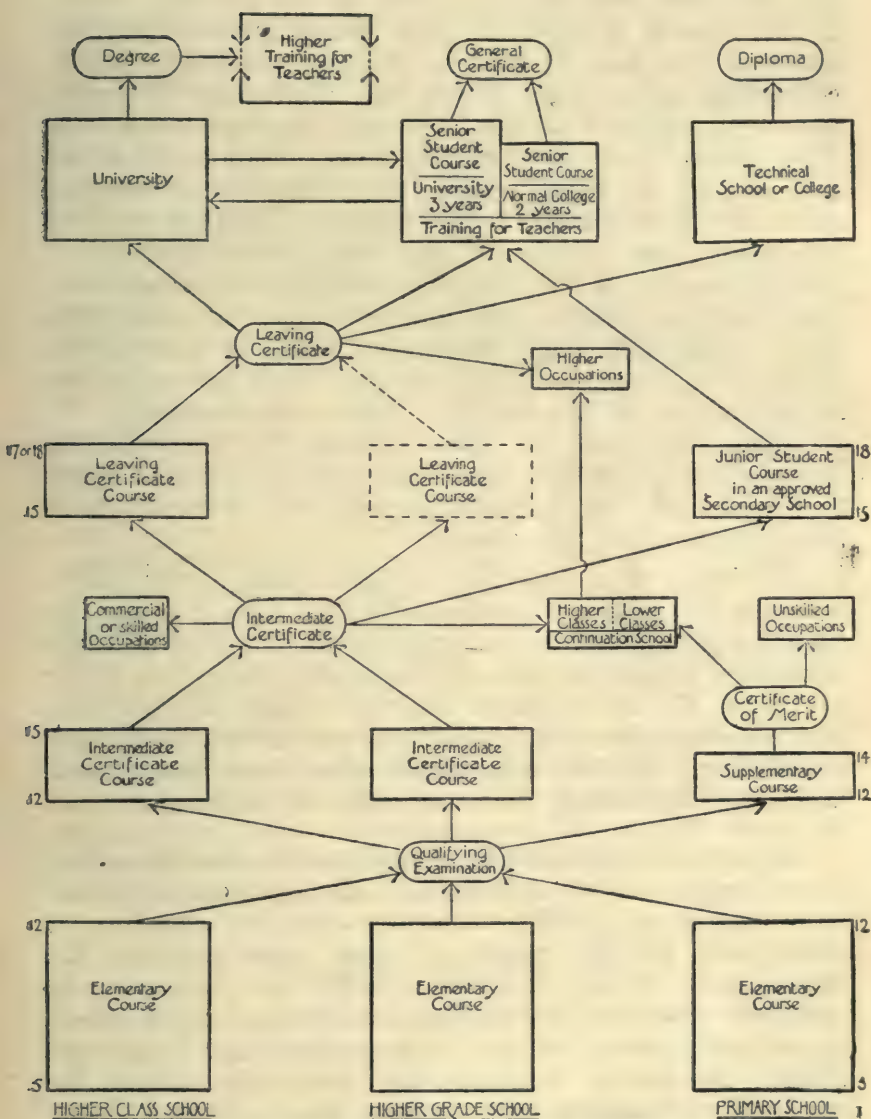
Department obtains throughout the country. The principle upon which the system is based is a sound one, but, unfortunately, it has not been carried out by some of the Secondary Education Committees in the spirit in which it was conceived. Primarily, the special object of the system was to equalise opportunity of obtaining secondary education as between town and country. It was not intended that, as a rule, a pupil residing at home should be given a bursary; on the other hand, a country bursar, living away from home at his secondary education centre, might, it was thought, be more liberally treated than he has been generally. In any case bursaries should be given not for merit only, but for merit which is in such circumstances as to be in actual need of assistance, and the amount should be proportional to the need. During the past year a sum estimated at about £150,000, obtained partly from the Education Fund and partly from endowments, was so spent, and undoubtedly it was much in excess of what it should have been. A bursary includes payment of school fees, travelling expenses if necessary, and a maintenance allowance where the case demands it. A distinction is made between intermediate and secondary bursaries, and, in general, it is the latter which include maintenance allowances. In each case a careful inquiry is made into the circumstances of the parent, and the proficiency of the applicant as testified to by the schoolmaster. As a pre-requisite for an intermediate bursary the Qualifying Examination must be passed, and for a secondary bursary it is necessary to possess an intermediate certificate.

Where there is any real difficulty in the way of pupils in outlying districts obtaining secondary education, which cannot be met by the application of the bursary scheme, and seemingly there is "occasional difficulty in isolated districts, what is best in the traditions of the old parish school is not slow to come to the rescue. In such districts—where there is not within easy reach a suitable intermediate or secondary school to which the boys or girls can be transferred directly after passing the Qualifying Examination—the Department has been able to sanction admission to the second, and in exceptional cases to the third year of the intermediate course of a secondary school, of a fair number of pupils who have done the work of the first (or second) year of the course in a primary school, with such success that in the opinion of the teachers of the centre school they

“ were fully qualified to take up the work of the second “ (or third year) ” there. Thus in certain circumstances exceptional provision may have to be made; but such cases are exceptional.

Arising out of the bursary system, it might be thought that the incomes of intermediate or secondary schools admitting bursars, and practically every one of these schools in Scotland admits a certain number, would vary with the number enrolled. Obviously this would place a school not financially strong in a difficult position, as it would be practically forced into the position of competing for bursars. Moreover, it is not every bursar who continues to justify his appointment, and to reject such might mean a financial loss to the school, while to retain them would mean an improper expenditure of public funds, and, in the school itself, an educational mistake. That the incomes of such schools do not fluctuate to such an extent as might be supposed is due to a clause in the Act of 1908, which provides that, so long as such schools are considered by the Department to be fulfilling the functions of a secondary school for the district, a certain proportion of the expenditure of each above a definite local rate, as already indicated, is met by a grant. Thus provision is automatically made for partial relief in cases of excessive but necessary expenditure, while at the same time a minimum of local aid is ensured.

This short paper cannot be fitly closed without paying a tribute to the Scotch Education Department, and particularly to its present Secretary, Sir John Struthers. To repeat that within the last decade or so Scottish secondary education has been wholly reorganised and its standard considerably raised is merely to repeat the obvious. But to a student of education this is not the distinctive merit of the policy adopted. It is rather the splendidly-conceived system with its great possibilities for development and progress in the future which appeals to him. Nor is the system a slavish imitation of what prevails elsewhere. It is Scottish and national, and the natural and logical outcome of a policy inspired both by the demands of the age and by traditions which hark back to the Reformation, considerably more than three centuries ago.



DIAGRAMMATIC SCHEME OF SCOTTISH EDUCATION
(Lowest limit of ages given)

[From the Author's *History of Secondary Education in Scotland*,
by kind permission of the Oxford University Press.]

SUMMARY OF THE DISCUSSION.

Mr. P. BOARD (New South Wales) said that he had listened with very great interest to Mr. Strong's paper, as the system adopted in New South Wales was very much on the lines of that in Scotland, especially in the differentiation of types of schools. One main difference, however, consisted in the fact that the high schools of New South Wales are entirely free. No fees whatever are paid in any State school, nor is any local taxation raised for the purposes of the schools. Another point of difference is the absence of the local control which is a distinct feature of the English and the Scottish systems. Although they might lose something by that touch with local feeling and local sentiment which is obtained in England and Scotland, they felt that they gained so far as the control of the teaching bodies was concerned. If the time ever came for local control in Australia, he thought that their divisions would be large ones in order to prevent any sentimental parochialism from affecting the government of the schools.

In reply to a question by Mr. Legge, who asked whether Mr. Board, in saying that they were copying the Scotch system, meant that you would not find a single secondary school for girls in Australia which was under a woman, Mr. Board stated that their high schools were not co-educational, and they did not intend that they should be. He did not mean that they had taken wholesale everything that was done in Scotland.

Mr. R. W. HINTON (Incorporated Association of Headmasters) called attention to the question of school examination by public authorities and the awarding of certificates on the results of these examinations. He particularly wished to know whether the certificates as granted in Scotland were a mark of distinction for exceptional merit, or an ordinary pass certificate for the normal pupil. He wished to raise one point also about the training of teachers. He thought that a master should not be called upon to decide as to the fitness of any young person to become a teacher until the student had had some actual practice in teaching.

Dr. SCOUGAL (Scotch Education Department) wished to offer a few remarks in explanation of the questions that were put by Mr. Hinton. The certificates granted

by the Scotch Education Department are not certificates of distinction, but certificates which can be taken by the average pupil. Their system of inspection and examination in connection with them is as liberal as possible, their object is not to lay pitfalls for the pupils, but to find out exactly what is the character of the work done in the school and the general level and type of the pupils. He was anxious to make it clear that the Department was doing everything possible to make the examination a fair test of the good work that could be done by the ordinary good pupils attending regularly and working steadily, and not an examination for honours.

The other point was with reference to the training of teachers. He said that the present system was better and promised much better things than the old pupil-teacher system. Before the pupil leaves the intermediate stage and enters on the junior student course, *i.e.*, a highly specialised course of three years in the higher grade or the secondary school, they ask the headmaster, who knows him well and has been watching his work, whether he believes him to be capable of being a teacher. He thought, speaking from his own experience, that it was dangerous to try to go further than that. It is impossible to learn teaching in the way that you learn a mechanical handicraft by an early apprenticeship to it. Premature practical teaching work is a danger to be very carefully avoided.

Mr. STRONG then said that there was very little for him to reply to, as Dr. Scougal had been kind enough to answer most of the questions. In reply to the question he had been asked with reference to the number of private schools, he said that the number was not large and they were mainly round Edinburgh.

Thursday, April 27th, 1911.

On Thursday afternoon, April 27th, papers were read by Mr. J. A. Ewing, C.B., LL.D., F.R.S., Director of Naval Education, on "Engineering Education," and by Mr. J. H. Reynolds, M.Sc., Principal of the Municipal School of Technology, Manchester, and Director of Higher Education for Manchester, on "Higher Technical Instruction," and a discussion followed. The papers and a *résumé* of the discussion are given below.

ENGINEERING EDUCATION.

By J. A. Ewing.

There are two great professions in which the fruits of scientific study and the methods of scientific thought are directly applied for the benefit of man. These two are medicine and engineering. In both of them science, in its broad sense as the systematic interpretation of natural phenomena, is the proper basis of practice, but in both we have to recognise as a fact of primary importance that the practitioner, to be even fairly competent, requires much more than a knowledge of science or even a habit of scientific thought. He must have profited by what may be broadly described as experience, not simply the experience which he acquires at first hand in his own attempts to carry out professional work, but such of the advantages of experience as it is possible to become possessed of by association with men who have already acquired it. While it is true that experience is a fruit which every man must grow on his own tree, it is equally true that the rate of its growth may be enormously affected by intensive culture. Put a young man into close touch with the practical work of his profession, after he has laid a sound foundation of scientific knowledge; associate him with persons of professional skill so that he can watch their work and they can direct and, when necessary, amend his; see that the practical problems he is faced with are suitably graded to his capacity and sufficiently various in their range; then experience grows fast. Under such conditions a few months will teach him more than he would learn in years of effort undertaken without proper preliminary education and with restricted opportunities and imperfect guidance.

The parallel between medicine and engineering is so close that it is worth pursuing a little further. In the early days both arts were almost wholly empirical; as their development proceeded the influence of science became more and more felt. The biological group of sciences that bear on medicine are themselves modern products; the mathematical and physical sciences that bear on engineering have in certain of their phases a greater antiquity, but in recent times they have made enormous advances in matters that concern the work of the engineer. It was only in the middle of the nineteenth century that the doctrine of the conservation of energy was formulated and the principles became recognised which condition the development and transmission of

power. It is difficult for us now to imagine what the art of the engineer would be without a comprehension of truths so fundamental. Our knowledge of the physical properties and constitution of metals, as affecting their use in engineering structures, has been acquired mainly in the last 50 years; and the same period has witnessed the immense strides in electricity and magnetism which have led into fresh fields of engineering. The sciences which form the basis of engineering have not only grown *pari passu* with the art itself, but between the two there has been a continuous and most beneficent interaction. Physics may be said to owe to engineering as much as engineering owes to physics. Many of the greatest advances in theory, notably in electricity, are direct fruits of the demands made by practice and of the facilities for research which arose through the development of practical appliances. I believe the same is true of medicine.

There is no need to labour the point, but it is important, in relation to the question of training, to recognise that whereas both arts began with nearly pure empiricism, both are now so dependent on and so closely related to science that the days of empiricism are dead. The transition has been gradual, and it has been accompanied by a corresponding, or perhaps I should say a somewhat lagging change in the conception of how a young man should be prepared for professional life.

The successful empiric was a man who had experience and who in general had also that practical intuition which comes neither from scientific studies nor from experience, the intuition which even in a scientific age is still a potent factor in the highest professional efficiency. To train an empiric the natural way was to set him to assist a successful empiric, to learn his trade by helping, by watching, and by imbibing such counsel as the man of experience might communicate. Accordingly the early system of training, both in medicine and in engineering, was a system of apprenticeship and nothing more. In the middle of last century it was still usual for a boy to learn medicine by becoming apprenticed to a doctor in practice for a period of five years or so, spending the earlier years in the drudgery of a surgery boy and the later in acquiring the art of talking to patients and cultivating a good bedside manner. In this he had at least the advantage of close association with a professional man, presumably one who had himself achieved professional success. Up to a much more recent date the training of

the young engineer usually proceeded on similar though even less favourable lines. Sent as an apprentice or "pupil" into the office of a civil engineer or into works, he was left to pick up practical knowledge as best he could, with no foundation of scientific comprehension, without system or guidance, and in most cases without even the personal contact with a successful chief which was a redeeming feature of medical apprenticeship.

Lest you may think this overdrawn, I shall read a few sentences from evidence given before the Royal Commission on Technical Education, which reported in 1884, by the late Sir William Anderson, an eminent engineer who was then a partner in the Erith Ironworks and who afterwards became Director of the Woolwich Ordnance Factories :—

"I have from 12 to 20 pupils who come chiefly from the great public schools. . . . The minds of most of these young men who come to serve their apprenticeship with us are a complete blank as regards any of the sciences. . . . Their mathematical knowledge is generally of a useless kind: it is all pure mathematics and they do not know how to apply it. They might just as well know no mathematics at all. They do not seem able to apply their knowledge to the simplest practical questions. . . . I have an uneasy feeling that the pupils who leave our establishment know little or nothing except the use of their hands."

And here is what is said of his own apprenticeship by Mr. Ellington, President of the Institution of Mechanical Engineers, in the presidential address delivered a few weeks ago :—

"I became a pupil in the 'sixties' and entered the works of John Penn. . . . When I went to Penn's, I had just left school and it was considered the correct thing to go straight into the workshop—in fact there was really no choice at that time—specialised engineering education except in the Navy was almost entirely absent; and while theoretical studies might be pursued at the Universities, practically all those who went in for mechanical engineering passed straight into the shops. There were a considerable number of pupils who altogether must have cost their parents a large sum. With regard to a great many, the whole affair was a pure waste of time and money. Every opportunity was given in the shops to learn the business, and John Penn himself was always

ready to assist when approached, but whatever one learnt had to be picked up."

Even at the present day examples may be found of young men seeking to enter the engineering profession in this haphazard manner. But it is now at least widely, though not universally, recognised that no proper education for the engineer is to be obtained by practical pupilage or apprenticeship alone, and that the ideal training is one which comprises, in addition to means of getting experience, a properly organised course of study in the relevant sciences taught with reference to their practical application. These "applied sciences" may be broadly described as the theory of engineering.

In the case of medicine a similar truth came to be recognised more speedily and more universally, no doubt because it found expression in legislative enactments. The young doctor is not let loose on suffering humanity until he has obtained a formal qualification which gives evidence not only of his acquaintance with the technique of the profession, but also of his having taken definite courses and passed definite examinations in the connected sciences. With a doctor the effects of inefficiency are so personal, so disastrous, and so liable to escape public notice that the safeguard implied in this procedure is welcomed by everybody except possibly by some candidates for a licence. With regard to the engineer, however, there is no general sense on the part of the public that a similar protection is required. An engineer's mistakes usually affect the pockets rather than the lives of his clients, and in the few cases where they lead to a catastrophe it is under conditions so public that the publicity serves at least as a safeguard against repetition. So we find no legal qualification is needed for anyone to practise as an engineer, and there is no legal prescription of what an engineer's training is to be. This is perhaps fortunate, for one has only to look round among successful engineers to realise that there are many effective ways of preparing an engineer for his profession, and within the profession itself there are so many different fields of activity that probably no single gate of entry would be suitable for all.

The Institution of Civil Engineers has done a good deal to foster right ideas about engineering education by requiring of candidates for admission to its membership that they should not only give evidence of practical experience, but should either pass an examination in theory

or hold an exempting University degree or certificate. It would be out of place to discuss these regulations in detail. In some respects they are, I think, unduly inelastic; on the other hand they do not prescribe that the candidate should have had a properly organised course of scientific study. To pass an examination in certain sciences is one thing: to have had the advantage of a University or college course in which the same sciences are well taught is quite another thing. It would probably be harsh on some deserving candidates if the college course were made a *sine quâ non*; but one may hope that as time goes on the candidates who have not graduated after a full course of engineering theory will become few.

The opportunities of taking such a course are now, happily, abundant. British Universities began to provide them about 70 years ago when a professorship of civil engineering was established in the University of Glasgow. To that chair Rankine was appointed in 1855, and it was while professor there that he issued his well-known series of text-books, which formulated the main divisions of engineering theory with extraordinary comprehensiveness and philosophic grasp. In 1868 the University of Edinburgh followed suit; Fleeming Jenkin, who was its first professor of engineering, was one of the distinguished band, which included Kelvin and Clerk Maxwell, to whom we owe the establishment of an exact system of electrical measurement adapted to practical requirements. Their labours laid the foundation of modern electrical engineering.

One may note in passing that the rapid growth of industrial electricity, in its application to lighting and to the distribution of power, which took place about 30 years ago, gave an immense impetus to engineering education. It became obvious then that rule-of-thumb methods would not serve an engineer confronted with such novel material. He could only treat the fresh problems as they arose by resorting to first principles, and so a knowledge of science became a recognised essential in his equipment. Thus the movement to give engineers a scientific training gained volume and force. Engineering schools sprang up everywhere. We now have hosts of them in the ancient Universities, in the new provincial Universities and University Colleges, in the Universities of the Colonies, and in various technical colleges which stand outside of, or on the fringe of, University life. Cambridge established its Tripos in Mechanical Science nearly 20 years ago, and soon became the home

of a vigorous school. Oxford has joined the movement under auspices that bespeak success, and all over the country we find establishments for the same purpose which vie with one another in the completeness of their organisation and material equipment. Very large sums have been spent, and the work goes on under the guidance of able professors who are keenly alive to the practical requirements of the engineer as well as conversant with the theory which it is their main business to teach. Engineering employers have for the most part awakened to a sense of the value of theoretical training on the part of the young men who would join their staff, and in competition with such candidates the outlook of any who content themselves with no more than the old-fashioned pupilage is indeed poor.

As might be expected, the result of this movement has profoundly affected British engineering. It came at a critical time, when the stress of foreign competition was beginning to be felt, and we were at a disadvantage from the fact that the foreigner saw the need for scientific training sooner than we, for the most part, saw it. Even now it may be questioned whether our eyes are as open to it as are his; I do not think they are. But even as things stand, much has been accomplished. You have only to refer to the papers that are read before our engineering societies or listen to the discussions that take place in them to be aware that a new generation of engineers has arisen whose mental outlook is different, who are familiar with the concepts and language of science, who think and speak in terms that would be unintelligible to men of the old school. And in listening to them you find that the new phrases and the new ideas are not the expression of a culture lying outside of their professional life. Science has become part of the very fabric, it helps to determine everything that the engineer does.

Of the nature of the work done by engineering schools I have some direct knowledge, having in past years been a professor of engineering and having more recently paid visits of inspection to a number of such schools. What struck me most in these visits was their general likeness—the substantial uniformity in method which has now been evolved. In so large a subject as the theory of engineering, greater differences may be expected than are in fact found. The general subdivisions of theory are much the same in all schools, and the treatment in detail of the several subdivisions is also much the same. This

tendency is in part due to the similarity or identity of textbooks, and also in considerable part, I think, to the very useful practice of having the professor in one institution serve as external examiner in another, in association with the professor there as internal examiner. This practice is now generally followed. It is in every respect a sound way to conduct examinations, to have collaboration between the teacher whose pupils are to be examined and some independent person possessing expert knowledge. Naturally the independent expert is most easily found by going to another school and bringing in the professor. An exchange of ideas follows between the associated examiners. It is useful to both: incidentally it tends to bring their methods of teaching into line. So the process of assimilation goes on, for each of these professors will probably serve another time as colleague to some other. The individual features of a school become toned down, or copied if they are good. This influence has now been so long at work that one finds a strong family likeness in the programmes of the various schools.

Of course through all this uniformity in programme there are wide differences in effectiveness. The personality of the professor will never cease to tell. The teaching in two schools may be nominally the same, but in one it may be inert, never striking home, in another it comes with a force of inspiration. Two laboratories may have the same apparatus: in one its use is a matter of dull routine, while in the other even the simplest experiment is invested with the interest of an original research.

The most conspicuous difference, as regards organisation, is that in some schools the division of engineering into branches is carried farther than in others; specialisation begins earlier and is more pronounced. In defence of this, it is urged that by arranging that a student will specialise in one or other branch he is made more immediately useful—more likely to find a market directly he leaves the college. Thus in some colleges we find separate professorships in civil and mechanical and electrical engineering, with more or less separate courses which diverge at an early stage. In one instance I found a separate course for motor-car engineers, with a distinct professorship of that subject. It may very well be that a young man specialising thus early in his course of study has an improved chance of earning his bread and butter in the line he selects. But the field of employment open to him is reduced, and he may find himself handicapped as regards

openings for which his special knowledge has no application. Further—and this point is a very serious one—time can be given to such specialisation only at the expense of that wider survey and better comprehension of general principles which should be the main purpose of a university course of engineering. Premature specialisation in engineering, as in anything else, means narrowness, and it is the business of the University to save the young man from that by laying foundations that are broad and deep, on which the superstructure of professional knowledge will afterwards be built. In those British Universities which first took up the teaching of engineering the ideal aimed at was to lay a general foundation; no attempt was made to give detailed information on professional subjects. From this ideal there has been in some instances a considerable departure; the American and continental methods, in which professional detail occupies a large place, are now more closely approached in several British schools.

The differentiation of professorships to which I have already alluded tends towards this. It allows of and practically compels a more thorough treatment of each branch, but it has serious drawbacks. There is apt to be a lack of co-ordination and balance between the various parts of the engineering school. The student who wishes a general course is not well provided for. It is impossible for any one student to take advantage of the more detailed courses that are offered in every branch; even if the hours did not clash the limited capacity of the student himself would put that out of the question. He is obliged to select, and the selected parts do not fit well together. Courses which cater for the specialist, given by separate professors, each naturally anxious to make his teaching distinctive of his particular branch, cannot be cut up into blocks that are suitable in combination to form a good course for general students of engineering. The result is a tendency on the part of such schools to send out graduates who are perhaps prematurely familiar with the details of one branch, but are very imperfectly grounded in the broad principles which find application in all branches. It is the comprehension of these principles that distinguishes the well-educated engineer, and to secure that should be the first care in planning a university course of engineering.

What then are the fundamental subjects which primarily require attention in the education of the engineer? I shall try to indicate them very briefly.

First there is mathematics—mathematics of the practical sort, to be regarded as a tool and not as an end in itself. Much of the older teaching of mathematics to engineers had but little value save as mental gymnastics; connection was lacking between it and the concerns of engineering. Thanks to the labours of Professor Perry and others, this has greatly changed for the better; it has become recognised that the study of mathematics by young engineers should not proceed on the lines that were appropriate for men whose intention was to make mathematics their main subject of study. To acquire a good understanding of engineering theory a certain amount of mathematics is essential, but the amount that is essential is surprisingly small. In this connection I would plead for a very early introduction of the leading ideas of the differential and integral calculus. As aids to understanding and expressing the notions of physics and mechanics these are of the utmost value. But no great expertness in mathematical operations is required. In his study of what may be called the normal range of engineering theory, the young engineer finds that he has to perform no more than a few of the simplest integrations or to solve one or two easy differential equations, and it is, I think, to many a considerable surprise and disappointment to discover how little use is actually made of the fine mathematical tools that have been tempered and sharpened with so much pains.

Then there is mechanics, or, as we may better describe it, applied mechanics, of all the engineer's studies surely the most important. For it gives him definite ideas of the natural world in which his work is to be done, of the things in it and their relation to one another, of how their magnitudes are stated and measured; of lengths and areas and volumes, of masses and forces, of motions and changes of motion, of energy and work and power, of the properties and dynamical actions of fluid as well as solid bodies. All these things are studied in relation to the practical work of the engineer, who has to deal with the behaviour of matter, solid and fluid, at rest and in motion, and the study is illuminated by constant reference to practical problems.

From this it is an easy step to pass to the consideration of mechanism. Here we are concerned with two aspects—one kinematical, the other dynamical. From the first point of view a machine is a geometrical contrivance for converting one kind of motion into another. From the

second point of view its function is to transmit or transform power, and in that aspect we have to do with the forces that are operative, with the losses of power in transmission, with storages of energy and with the dynamical balance of the moving parts.

Then another great division of the subject deals with what is called the strength of materials and the theory of structures. Here the student learns something of the preparation and properties of the substances used in engineering construction, how their strength and elasticity and plasticity is tested, what stresses they may safely bear under various conditions of loading, how the dimensions of the parts of a structure or machine are determined so as to provide a proper margin of safety against breakdown, how the life of materials is affected by fatigue under variations of stress, how internal stresses may arise, as for instance by the unequal effects of variations in temperature. He studies the action of stress and the nature of the resulting strain in beams, in columns, in frames made up of struts and ties, in shafts under torsion, in pipes and shells under pressure from within, in hanging chains and arches. He learns the principles of design so far as these have to do with the selection of forms and the proportioning of parts with a view to sustaining the forces that a structure has to bear.

Still another section deals with what are called prime movers or machines for producing mechanical effect by drawing upon some natural store of energy. By far the most important of these are heat-engines, where power is obtained from the combustion of fuel. This requires a knowledge of heat and of the properties of gases and vapours, and of the thermodynamic principles that govern the conversion of heat into work. Incidentally the study is extended to the converse operation of expending work to effect a transfer of heat from one body to another warmer than the first, on which the process of mechanical refrigeration depends. Steam engines of the reciprocating and turbine types, gas engines, and engines using liquid fuel have all to be dealt with as complete machines involving many practical considerations beyond those that enter into the theory of thermodynamics; and something must be learnt of the combustion of fuel and the conditions that make for efficiency in boilers.

Another great division is applied electricity. This is now so large a subject that the general student of engineering cannot expect to do more than learn its more fundamental parts, leaving the rest to those who aspire to

become electrical experts. But he must at least know something of how electrical and magnetic quantities are measured, of the characteristics of the electrical current, both continuous and alternating, of the types and uses of dynamos and motors, and of the conditions that determine efficiency in the electrical transmission of power.

Mechanical drawing is an indispensable part of his equipment, because it is the very alphabet of expression on the part of the engineer. He may not require to be an expert draughtsman, but he must be able to read drawings, and himself to use the pencil sufficiently to communicate ideas and intentions. Closely connected with drawing is the art of surveying, in which the student has to learn certain conventions of representation as well as modes of measuring distances and angles and levels on the ground. Finally, there is the experimental work of the engineering laboratory. I am a profound believer in the value of the laboratory, not only as a means of research, but as an instrument of education. It brings the student face to face with *things*; the principles taught in the lecture room acquire a new meaning when the student recognises them in the experiments which he carries out in the laboratory. Put a good student into a laboratory and you inspire him with the enthusiasm of the investigator; put a good teacher into a laboratory and he never ceases to be a student. The normal work of the laboratory is measurement: measurement of strength and elasticity, of heat, of work, of efficiency, of the accuracy of instruments, and many other things, including measurements specifically planned to bring home to the minds of junior students the fundamental facts of mechanics. There is scarcely any limit to the range of experiments that may be undertaken in the engineering laboratory, by setting the student to investigate the action of various types of engines and other plant. Consequently we find in some laboratories a highly elaborate equipment, installed at great cost, and presenting to the student a bewildering variety of opportunities. I venture to think that in some cases this has been carried too far, and especially that some of the individual items of equipment are needlessly large and complex. This means waste, and it also means that the student learns less, for he never ventures on the same familiarity as he would show to a simpler machine. Further, in the furnishing of a laboratory it is easy to make the mistake of exhausting both funds and space, leaving little or no provision for the additional pieces of plant that will certainly be wanted

later, to meet the future requirements of so progressive a science as engineering. All teachers do not realise how much of the best laboratory work is done with the simplest apparatus; how vastly more educative it is to the student to have to rig up appliances for himself than to find everything ready to his hand; how little the real value of laboratory training depends on the costliness and elaboration of the plant. The temptation of the engineering professor is great, when funds are available, to go one better than his neighbours in other schools in the number and scale and ingeniously varied capabilities of his engines and testing machines, and so forth; but it is a temptation to be resisted.

What he ought to do, however, by all means in his power, is to encourage his better senior students to undertake original research. I am afraid this is not recognised as it should be. The professor has to be an enthusiastic investigator himself to beget the same spirit in his pupils. Some professors seem to think that engineering students who prolong their University course for the sake of engaging in research are, as regards professional prospects, wasting their time. I do not share this view. If a young engineer has it in him to do a piece of original research—a thing by no means common—he will find it a most valuable piece of professional education, and it is well that he should seize an opportunity that is not likely to recur. Apart from its value to the investigator himself, research is vital to the progress of engineering science, and the college that does not foster it is neglecting one of its chief functions.

The opinion used to be very general among British professors that the use of tools could not be taught in a college workshop in such a way as to have solid professional value. Experience, however, has now led many to the contrary view. Personally, I have no doubt at all of the effectiveness of the college workshop as a means of professional training, provided it is set up on a fairly large scale and well furnished with good machinery, and that the teaching is properly organised with skilled workmen who are at the same time competent instructors. This is borne out by our experience in the training of naval cadets. The college workshops at Osborne and Dartmouth play a large and most important part in the new scheme of naval training, and in them the cadet does in fact acquire much of that practical knowledge which the young civilian engineer acquires during his apprenticeship or pupilage, as to methods of work in construction

and repair and even in design. I do not suggest that such an element in the training of engineers can entirely take the place of experience of practical work done on a larger scale and under commercial conditions, but I hold strongly that much of what the apprenticeship is designed to teach can be taught more effectively in this way, and with far less waste of time. And further there can be no question that this concurrent training in the processes of the workshop is beneficial to the other sides of the college course. Its effects are seen in a quickened interest and an enhanced appreciation of practical values throughout all the subjects of study.

The ordinary student of engineering must, however, look to getting his workshop experience either before or after his collegiate education. There is much to be said in favour of both plans. On the whole, the advantages incline to having the practical training follow rather than precede the other, mainly because the mental equipment given by the college course will make each stage of the practical training enormously more full of meaning than it can be when the pupil attacks it without preliminary knowledge of the *rationale* of what he has to do, or sees done. But no adequate discussion of this point can be attempted here.

One more remark and I have done. The vitality of an engineering school depends largely on the professor's keeping himself in touch with engineering practice, and to this end it is highly desirable that he should himself engage to a certain extent in professional engineering work. He should be not only permitted but encouraged to do so. Governing bodies are apt to restrict the activities of the professor outside the college, in the fear that he may become so engrossed in practice as to neglect his professorial duties. It is better to take the risk of that—a risk which is rarely very serious. To bar an engineering professor from outside work is to make him less efficient as a teacher, and is the way to prevent the best men from seeking or holding professorial appointments. The professor should have a free hand, subject only to an understanding that the governing body may step in if need be to exercise a veto in cases where they find that he is abusing this freedom by undertaking work which, through its excessive amount or unsuitable character, is interfering with his duties or damaging his influence as professor.

HIGHER TECHNICAL INSTRUCTION.

By J. H. Reynolds.

In considering the question of higher technical instruction in the United Kingdom, a subject as I believe of vital importance to the nation, though worn somewhat threadbare by incessant discussion, I am met at the outset by the absence of any returns which give, with even an approach to accuracy, any information as to the number and quality of the students participating therein.

Neither the Board of Education in its reports, nor the Association of Technical Institutions, nor even such a miracle of compilation as the German year book, "Minerva," with its 1512 pages of highly condensed statement as to the Universities and advanced institutions of learning throughout the world, afford precise knowledge of the number and quality of the students engaged in higher technical instruction. It is therefore extremely difficult to make fruitful comparison between the facilities offered in the United Kingdom and those available abroad, especially in Germany.

The effort of the Association of Technical Institutions of nearly a year ago to obtain reliable statistics of students in the various Technical Schools of the United Kingdom taking advanced studies in the daytime for an adequate time was a failure.

And the Board of Education in its "List of Day Technical Courses for 1908-9," the latest available return, mixes up the students taking one or two year courses with those whose studies extend to three or four years, and includes pupils of 12 years of age with students whose ages range from 16 upwards.

On the same page are to be found the matriculated students of the Universities and the higher technical institutions included with children who have not yet left the elementary day school.

And, in "Minerva," 1909-10 edition, I observe amongst the list of "Technische Hochschulen" an important Technical Institution in the United Kingdom which is reported as having 5,100 students, and immediately next to it is given one of the most famous of German Technical High Schools with 3,142 day students (2,209 of whom are matriculated), all of whom are over 18 years of age and taking subjects confined to Civil and Naval Architecture—Engineering and Applied Chemistry, and extending over four years.

In the case of the former school, the students were almost entirely evening, who were any age from 13 to 14, taking short courses, hardly any had matriculated, and their studies embraced Science, Art, Commerce, Technology of Trades, Women's work, and a Trade School for boys. Clearly no useful or fruitful comparison can be made from such figures.

Whilst we have this confusion in our statistics, I venture to say we can never hope adequately to realise our true position in relation to foreign nations, especially to those who are our commercial and industrial competitors.

What we really ought to know, if we wish to understand the position and results of higher technical instruction in the United Kingdom is, how many duly prepared day students of 16 years of age and upwards are to be found in our University Colleges and in our Technical Institutions, studying the various branches of Engineering (including Civil Architecture), of Applied Chemistry and the Manufacture of Textiles, what is the length of the course taken by them, how many complete it, and how many are of such calibre as to be able to conduct independent research.

It must be at once conceded that no technical training is of any real value that is not based on sound scientific knowledge, accompanied by a mental discipline of high quality which has trained the student to the habit of accurate thinking and intelligent observation.

It is not, therefore, by a mere comparison of Technical Institutions or of students enrolled in them that we can arrive at a true estimate of the relative position of, say, Germany and the United Kingdom. We must know something of the range of studies, of the length of the school life, of the methods of instruction, and of the attainments reached by the pupils of the secondary schools, since it is to them that the Universities and the Technical High Schools of the nation must look for students. Upon the quality of the students admitted to the higher institutions depends absolutely the value of their output.

And here I would remark that it is high time that the secondary schools—or such of them as can present satisfactory credentials—should receive State recognition, and be relieved from all external examinations, and their leaving certificates (duly safeguarded as to subjects and length of course) be accepted by higher institutions of learning throughout the Kingdom as giving complete and

satisfactory evidence of fitness to enter upon a further stage of advanced study.

In my opinion no reform is more urgent than this. Why should not the leaving certificate of a duly accredited English secondary school have at least the force and value of the *Reifezeugnis* of a German *Gymnasium* or *Oberrealschule*. Such a reform would give dignity to the secondary school, tend to lengthen the school life of the pupils, and place the school in right relation with the universities and other special places of learning.

Whether we are "tired of Germany as a model or not," she is too formidable an antagonist in the sphere of world-politics—in the domain of high learning—in the field of manufacturing industry, and in the world's market, for us to ignore her rapid advance, or to be indifferent as to the cause.

Within a generation of living men her sun has risen above the horizon, and has blazoned forth, as it is rising towards the zenith, with a splendour that compels our admiration, even though it may fill us with alarm.

It is hardly more than a hundred years ago since Prussia lay "a bleeding and lacerated mass" under the heel of Napoleon, but she fortunately had men with long vision and keen insight as to the true principles by which the nation should ultimately find salvation, and they founded the University of Berlin, which in 1909-10 had 13,827 students, "to supply the loss of territory by intellectual effort."

In short it was to education, thorough and far-reaching, that these wise counsellors looked for the means whereby their nation should regain and enhance its position in Europe and the world, and the faith and hope which inspired them has, as we all know only too well, been more than justified.

Forty-two years ago there was published in this country a book, than which I venture boldly to say, in spite of all that has been said and written since, there has been nothing either said or written which more plainly puts before the nation its educational needs, and the right measures to supply them.

I have in mind J. Scott Russell's epoch-making book "Systematic Technical Education for the English People," published in 1869.

The author declares his object to be "to move the minds of English Statesmen towards making the English Nation the Best Educated People in Europe." It will

be remembered that, along with Brunel, he was the designer of the "Great Eastern." He was by education, scientific training, business experience, and wide travel, a thoroughly competent observer, with a singularly acute and logical mind, and having a profound faith in the capacity of his countrymen. He had come to the conclusion that the English nation was nearly the worst educated of the peoples of modern Europe, but that no people would be more responsive to the pains and care of the statesman who should undertake measures for their general, scientific, and technical education.

It was the aim of his book "to show how to form
" a nation of well educated Englishmen, where each
" workman shall thoroughly know his work ; where each
" foreman shall thoroughly understand the right principles
" and best methods of executing that work ; and where
" each master of a manufactory, and each member of a
" profession, shall have received the highest education
" in the philosophical principles and modern methods of
" his Art, Science, or Profession."

Much water has flowed under London Bridge since the days of Scott Russell. We have reorganised and made national our elementary education, we have greatly increased the opportunities of secondary education, and brought a new spirit into its methods and aims—we have, in short, made education a recognised public duty, and where we spent one million in his day from public funds on elementary education we are spending twenty millions to-day. Technical Schools have been established in every industrial area—Provincial Universities have been founded—the University of London has been reorganised and constituted a teaching body. The City and Guilds of London have liberally responded to calls upon their funds for the foundation and sustenance of schools and colleges designed to promote the increase of scientific technical training in our various industries.

And yet in 1911, the pleas and remedies put forth in Scott Russell's book of 1869 remain as cogent and as greatly in need of enforcement as on the day they were written, and as directly applicable to the present conditions of industry. The essential features of such a book deserves a re-publication at the hands of the Board of Education with such modifications as modern experience and progress would demand.

We were a generation behind the German nation in 1869, and we are hardly less so to-day.

The reasons are not far to seek. For the first three quarters of the 19th century our people were neglected by their leaders.

Neither elementary, nor secondary, nor University education received attention, and where no seed had been sown no fruit could be expected.

Not so with Germany—where, as with Scotland, there was a long educational tradition—the seed sown in sorrow and disaster of 1806 bore its ripe fruit a half-century later, when the discoveries of science, in which the early part of the century had been so rich, found applications at the hands of clever inventors in various fields of human enterprise, greatly stimulating production, and bringing into service vast stores of material and power hitherto unnoticed or unused by man.

The progress of scientific discovery found Germany ready. In her numerous Universities and Technical High Schools there were the men in large numbers who by reason of their scientific training were prepared to take advantage of possible scientific industrial developments.

In no other way can the phenomenal advance of the German nation be explained, and the evidence of this advance is seen in her enormous output of fine chemicals, which has enabled her to put the whole world under toll—in her great mechanical and electrical engineering developments—and in her mercantile marine.

She had created, as Bismarck described it with a certain cynicism, an educational proletariat, but this only meant that she had at command a vast supply of educated labour, the very instrument needed to turn scientific discovery to practical account.

It is perfectly true that we, too, have made great advances in all departments of education in the forty years under review, but we cannot leave out of consideration the fact that Germany was in a position which enabled her at the very beginning to seize the opportunities offered.

Thus, whatever be the progress we have made, the advance of Germany has been maintained, and in some departments of industry her position is now apparently beyond serious challenge.

How then do we stand from the point of view of our educational means and resources?

We are only just beginning to make really effective our facilities for secondary education.

The average school life of the pupils in our secondary schools is, however, hardly more than three and a half years, possibly less; and, indeed, the Board of Education state in their last Annual Report for 1909-10, that "the average length of school life in schools on the Grant List is not yet nearly so high as it should be. Some improvement is being made, but it continues to be slow." Short as it undoubtedly is, it would be even shorter were it not for the considerable number of pupils enrolled who are preparing to become teachers.

So long as this short secondary school life prevails there cannot possibly be any satisfactory supply of students to the universities or to the technical schools of high grade, nor can the teaching in these institutions be of a satisfactory standard.

We have largely increased our facilities for scientific education. The United Kingdom now boasts eighteen teaching Universities as compared with half that number sixty years ago, and the enrolments, including the students in University Colleges, possibly reach 40,000. In the twenty-two Universities in the German Empire, the enrolments are nearly 58,000, but to these must be added the students enrolled in the ten Technical High Schools, namely, 15,885, making the total enrolments nearly 74,000, whilst the age of entrance and the state of preparation required is admittedly much beyond that prevailing in this country. By the recent regulations entrance to the Technical High Schools requires not only the certificate of complete attendance at a *Gymnasium* or *Realgymnasium* or an *Oberrealschule*, but a year's preliminary experience in a works as well.

This all helps to establish a position of intellectual strength which goes far to explain the industrial and commercial position of Germany to-day.

It is extremely important to remember the extent to which this country is dependent upon foreign sources for the supply of raw materials for conversion into articles of use, and that in this regard it enjoys no advantage, as it did formerly, over such nations as Germany or the United States. The far greater part of its wool, iron, copper, lead, tin, timber, wood pulp, &c. it must of necessity import, not to speak of cotton, which forms so important a feature of its manufacturing enterprises. From this point of view it enjoys no advantages, except what are purely accidental and removable, over competitors skilled in the methods of conversion, and the

ultimate superiority must rest therefore with the nation best equipped with scientific knowledge, and the power to apply it.

Even the advantage which we enjoy in the supply of fuel ready to hand as a source of cheap power is now largely neutralised by the advent of electricity, which has turned every river valley in countries devoid of fuel into a source of perennial power, and enabled them, as in the case of Switzerland, to become important industrial exporting centres.

And because of the very prodigality of our resources in coal, we have neglected in large measure to study the best methods of its conversion into power, and wasted where we might have saved. On the other hand, the Swiss and the Germans have, because of their necessities, been compelled to enter into close scientific research in order to resolve the difficult problem how to get the greatest amount of power from the least possible consumption of fuel. Witness, for example, the production of coke used for metallurgical purposes. Our method of production by means of wasteful ovens of the beehive type has been entirely superseded by those devised in Germany, and firms in this country building coke ovens accept designs of German or continental origin.

The truth is, we have got to realise the hard fact that material conditions are tending towards equilibrium, and that superiority can only be maintained by a sedulous cultivation of brain power and a firm discipline.

As Huxley well puts it in his Address on the opening of the Mason College, Birmingham, in 1880 :—

“We may take it for granted then that, in the opinion of those best qualified to judge, the diffusion of thorough scientific education is an absolutely essential condition of industrial progress. Almost all the processes employed in the arts and manufactures fall within the range either of physics or of chemistry. In order to improve them, we must thoroughly understand them, and no one has a chance of really understanding them unless he has obtained that mastery of principles and that habit of dealing with facts which is given by long-continued and well-directed purely scientific training in the physical and chemical laboratory.”

There is a further consideration of high importance which cannot be neglected. The tendency to produce the coarser and plainer goods in every part of the world

where they are consumed is increasing. To the most gifted and highly educated of the nations will fall the duty of supplying the demand for high finish, for fine design, for better quality and for the products of inventive skill, the fruits of knowledge and investigation.

The facilities for higher technical instruction in the United Kingdom it must be admitted have been largely increased, in considerable measure as the result of the Technical Instruction Act of 1889 and the Customs and Excise Act of 1890.

Schools of exceptionally fine equipment, and officered by competent staffs, such as those of Manchester and Glasgow (the former a municipal, the latter a philanthropic effort) have been built, rivalling in their completeness the best on the Continent, devoted, however, not to day students only, as in their case, but to the needs of great numbers of evening students also.

The Universities likewise have had special regard to the applications of pure science, and schools of Engineering, Applied Chemistry, and Mining have been established, and, in the case of one University, a department also of Textile Manufacture.

Hardly any satisfactory figures are available as to the number of students in the Universities who are studying science with a view to its industrial applications, but it is certain that the number is small by comparison with those so engaged in Universities and Technical High Schools abroad, and still more unsatisfactory is the small number, having regard to the enormous industrial enterprises in which the nation is engaged, and which give it at the present time the first place in the whole world.

Of the seventy-four Technical Institutions which comprise the Association of Technical Institutions only twenty-seven have any day students over 16 years of age taking 20 hours per week in science as applied to manufacturing industry, and the total number so engaged is only 1,842, or less than half the number to be found in the Technical High School of Charlottenburg, or of Munich, or in the Institute of Technology at Boston.

Moreover the students of the former are enumerated as from 16 years of age in place of 18, and are in most cases admitted on a not very satisfactory standard of examination, and further include subjects in their course to be found abroad only in *Gewerbeschulen* or special schools of mono-technic type.

The Board of Education in its Report for the year 1909-10, states that—

“The total amount of advanced instruction of the kind provided in Technical Institutions is still disappointingly small. In some of the more important industries, as, for example, Engineering, the instruction is largely utilised by students; but in a great many others the supply of students is very small. It is to be deplored that there are several schools in which the well-qualified staffs and the excellent equipment practically stand idle in the daytime through lack of students.”

Out of 3,400 day students enrolled in recognised Technical Institutions in 1908-9, there were 211 students under 16, and only 1,990 took full courses of instruction. Of these 406 were engaged in work of the third year, and 125 in still more advanced work.

I do not know that I could offer a more apt illustration of the different attitude towards technical training of an advanced character mainly devised for men intended for responsible positions than to submit a statement respecting the Textile Schools in this country and in Germany. We have in Lancashire, in Yorkshire, in the West of Scotland, and in the North of Ireland a few well-equipped and well-staffed institutions for education in the manufacture of textiles of all kinds. No one with any knowledge of the extent of this great industry, of the immense capital sunk in it, of the large number of people it employs, of its vital relation to other industries which are in part its creation, such as the engineering and chemical, of the large proportion it makes to our total export of manufactured goods, can doubt its high importance. Yet it is scarcely credible that the total number of day students of 16 years of age and upwards taking 20 hours per week is not more than 180, and 147 of these are to be found in three institutions. This number of day students will be found in Crefeld alone.

Not only is there to be found provision for this training in six of the German Technical High Schools, the entrance to which is very severe, but the Prussian Government has established, in pursuance of its policy of systematic promotion of technical instruction, no less than fifteen Textile Schools—seven of which are what are known as Higher Special Textile Schools. The number of enrolments of day students exceeds in the latter more than 1,000 students, and in the former about 350—or a total of upwards of 1,350.

This is in painful contrast with the small number to be found in English schools of similar type. The Special Higher Schools are distinct in type—one dealing with half silk goods and velvets—another with woollens—a third with ladies' cloths and trimmings—a fourth with cotton spinning and manufacture, and so on. The whole of these schools are under the control of the Director of the Textile School in Berlin, from which centre emanates the latest information concerning matters of recognised technical importance made known in any part of the world for use in the various schools, together with samples of materials for instruction in design and analysis.

The hours of work per week are nearly half as long again as in English schools of similar type. There is abundant evidence of the value of these schools in promoting and stimulating the local industries—and especially is this the case with Crefeld, which does a very large export trade with England in its special cloths. The importance of a museum of fine examples of fabrics, which is constantly replenished with the latest foreign productions, is fully realised, so much so that it has resulted in the foundation of a new local industry.

I have dwelt at some length on this aspect of technical training as affording a striking example of the foresight and solicitude displayed by a strenuous, enterprising foreign nation in the promotion of its industries.

To those desirous of pursuing this subject of technical training, I can commend nothing better or more stimulating than a careful perusal of the Diplomatic and Consular Reports on Scientific and Technical Education in the German Empire, prepared by Dr. Rose, and issued by the Foreign Office. They are a mine of information, and show with striking clearness the wealth of provision made to supply efficient training in every industry of importance, and for all grades of their service.

We suffer in this country from a want of appreciation of the value of scientific knowledge and investigation in its application to manufacturing industry—first by the employers and directors of industry, and second, from the immediate managers, whose indifference often amounts to serious hostility. Not until the great industrial concerns are recruited more largely than is now the case from the product of the schools will there be any serious change in this regard. It is no uncommon event nowadays to find in some American concerns the whole responsible staff comprised of College graduates. There is a keen appreciation of the value of such men, and it is stated as

a fact that on the occasion of the last graduation of the students of the Massachusetts Institute of Technology, which numbers nearly 1,600 students, on a four years' day course, there were two places for every man.

But there is not only the indifference of employers and managers to contend with, but the short-sighted policy of parents and students, who take the most empirical views of the training upon which the latter desire to enter. It is imagined that technical training is a mere matter of manipulation, of dyeing without a knowledge of chemistry, of engineering without an efficient training in mathematics, mechanics, and physics. It is not sufficiently realised that the training given is to put the student in the position, not only of clearly understanding the *raison d'être* of the processes in which he will be engaged, but of being able to appreciate the value of problems as they arise, and to enter intelligently into their careful investigation.

No one doubts the Englishman's capacity—there is striking evidence of it, both at home and abroad; it is his salvation, but, as the head of a large American engineering firm in this country, himself a Technical High School graduate, once said to me, "I am astonished at the capacity of the Englishman, but why does he not add knowledge to it?"

I would not have it understood that there has not been in the last few years a very considerable change for the better in the attitude and sympathy of employers in their appreciation of scientific and technical training.

Many large firms and some public companies have made known schemes and conditions of admission to their service, requiring, according to the position sought, certain definite attainments, and such firms will gain enormously by their enlightened policy.

It would be of great-public advantage if there were published a list of firms and of public departments who have definitely laid down schemes of admission to their service based upon educational requirements.

This would result in a much better appreciation of higher technical instruction than now prevails.

Moreover, there would further be a great advantage if in Government and municipal undertakings there were offered definite opportunity of practical experience, if only for a limited time, to duly accredited students, since it is impossible to give in any technical institution that close touch with realities which the conditions of actual business compel.

Technical training, no matter how complete, is not, as is sometimes vainly imagined, a substitute for the workshop; the former of necessity wastes material that the student may learn, in the latter nothing must be wasted, nor is it to be implied, because a student has acquired knowledge of a certain kind and amount, with a certain facility in its application, that he is necessarily a man fit for great responsibilities, since so many other qualities go to the making of a first-rate manager or director.

In my view, far too wide a meaning has been given by the Board of Education to the expression "Technical Institution." It should be rigidly confined to institutions which have equipment of high quality, and which are efficiently staffed in all departments. Some institutions attempt far more than they can properly fulfil.

Rather than attempt work for which they have no adequate fitness, it would be wise economy of public resources to select really capable students in given localities and send them to some recognised school.

It is quite impossible, for example, to set up with any approach to success, more than one school dealing with the subject of Paper Manufacture—a large and growing industry in the main, but sporadic in its location. The industry is capable of great development; the materials employed, or capable of employment, are the subject of constant investigation, and only a central institution, fully equipped, is capable of dealing efficiently with its problems.

And what is true of this department of industry is true of many others—of the ceramic industry, of steel-making, of brewing, of mining, and of different branches of textile manufacture.

As a nation, we show ourselves impatient of theory, and place our faith in the practical man. We have had, perhaps, some justification for this in the past conditions of industry, but the progress of science has made the theorist indispensable.

It can be shown conclusively how completely modern industrial developments find their beginnings in the long-continued, patient investigations of the scientific man in the laboratory, equipped with implements of precision, and conditions indispensable to exact and fruitful research.

We cannot afford that all this work, depending upon high scientific training, and upon the application of the finest scholarship, should be done mainly abroad.

Many of the most important advances of recent years in the applications of science to engineering have been

made abroad, of which instances were given in a recent important article in the *Engineering Supplement* of the "*Manchester Guardian*."* Many English engineering firms are doing a large business in the manufacture of turbines under licence, such as the de Laval (Sweden), Rateau (France), Zoelly (Switzerland), Curtis (United States). It is not realised, moreover, how great is the debt to Germany with respect to incandescent gas and electric lamps—nor to the development of the gas engine and oil engine of large powers.

In the use of electrical appliances of various types we are under deep obligations to foreign scientists and designers. Of these may be named, alternate current machines, the individual drive of ring spinning frames by means of special variable speed electric motors, electric furnaces, and electric drives for reversing rolling mills. And we are equally indebted to the genius and research of French engineers for the design and construction of light and powerful petrol-driven motors, which has made the heavier-than-air machine a practical success.

It is needless to mention the immense obligations under which we, with the rest of the civilised world, lie to Germany in respect of the applications of chemical science, all of which are the result of the highest possible theoretical training.

Of the union of science with manufacturing industry and enterprise, no more striking example was afforded than the splendid co-operative exhibit of the German scientific instrument makers at the Paris Centennial Exhibition of 1900.

There was brought together for the first time a magnificent collection of scientific apparatus of the highest quality, contributed by 700 firms, who issued a joint catalogue in three languages.

They pointed with pride to the fact that they were no longer dependent upon England or France for scientific appliances used in the arts and in navigation.

They referred to the fact that the foundation of their success lay first in the establishment of specialised schools, first in Berlin, then in Frankfurt, and afterwards in other towns where savants and practical men are combined in training the rising generation in the theoretical departments of the subject. As a result of these serious scientific

* "*The German Invasion*," by a British Engineer ("*Manchester Guardian*," April 18th, 1911).

aims, German mechanics and opticians sought in their laboratories and workshops the assistance of scientists, and at the present time the majority of the leading firms retain one or more experienced mathematicians in their permanent service.

It is further stated that the greatest share of the impetus given to the manufacture of scientific instruments is due to the Imperial Physical and Technical Institute of Berlin. The first or scientific department is devoted to pure physical research, whilst the second or technical department deals with matters concerning the construction of philosophical instruments. This institution has already done great service, and a large proportion of recent progress is due to its stimulating and helpful influence, with the result that in the art and science of instrument construction Germany occupies a foremost place.

As the writer in the Journal before quoted says :—

“At one time we led the world in mechanical invention and enterprise, to-day we are a bad second to Germany, and allowing for differences in population, to Switzerland. What is the cause? Our natural advantages are at least as good as Germany's, probably better, and when we are told how to do a thing we can generally produce a more workmanlike job than the Germans, at least in industrial machines. German designs are apt to be complex and costly to manufacture—we tend to simplicity even at the sacrifice of something of theoretical correctness. The average English designer does not know enough to appreciate fine points of theory and scientific correctness, the German does not know enough to appreciate the point at which his fastidiousness becomes unnecessary and costly.

“The spread of knowledge, increase in specialisation, and the continual demand for greater efficiency and refinement undoubtedly demand from the leaders in organisation and design a keener appreciation of science and theory than ever before, and also a much wider outlook. The instinct of our engineers and mechanics for simplicity and economy is a most valuable asset. At the same time we do need to encourage scientific attack upon industrial problems. It paid us in the past, and it pays Germany to-day.”

I would here desire to say a few words upon the provision for higher scientific and technical instruction in evening schools.

The provision, since the Technical Instruction Act of 1889, has much increased in volume and in quality, and in late years especially in efficiency of organisation, but from the very nature of the conditions it is not possible to give, except to a limited extent, really advanced teaching in science or technology to evening students. Indeed it is only possible to arrange it in localities exceptionally situated, where the population is large, and where the industrial conditions are such as to attract a high type of workers. It is in the North especially where these conditions prevail.

The evening school is far from being the institution it should ultimately become, whether regarded from the point of view of the numbers enrolled or the quality of the instruction which might be given.

It will be observed that there is an adolescent population of probably five millions of both sexes between the ages of 14 and 21 years; that there are only three-quarters of a million students enrolled in England and Wales in evening schools, which figure includes students of all ages much beyond 21. This shows how colossal is the task of providing effectively for the continued education of our youthful population. Why, even in Manchester, with all the efforts that have been made, there are twenty-five thousand persons between 14 and 17 years of age of both sexes going to no school at all.

And as to higher technical instruction, so important to those engaged in industry, the records of the Board of Education and of the City and Guilds of London Institute show only a very small proportion of successes in the honours stages of the various science and technical subjects. At the same time the facilities offered in the evening schools have enabled many young men of promise and capacity to qualify and to enter upon industrial positions of high importance, and their usefulness in this regard will continuously increase with the advancing years.

I have dealt with the question entrusted to me to the best of my ability and knowledge. My words are a plea for a keener appreciation of the economical position, of the value of knowledge, of the need of sound theory, of the necessity for a more determined sacrifice of time and money, and especially are they a plea that our young men should subordinate the passion for games, which

seems on the increase with all classes, to a keener intellectual zest.

How few of our college students in the precious closing years of their student life are content to shorten a summer vacation, that they may take advantage of practical experience in the factory, or mine, or workshop? Yet this, as I well know, is a commonplace with a foreign student.

The spirit of the "Wanderjahr" is still alive, and as of old the German student travels from school to school and from place to place adding to his harvest of knowledge and experience.

I do not know whether I was expected to praise our attainments in the field of higher technical instruction or to criticise the present position. No man has a closer acquaintance than I with its progress, since I have seen it grow from very humble beginnings. I am glad so much has been gained, but I am keenly sensible of the struggle into which we have entered with the best-equipped nation in the world so far as education is concerned, but I do not wish to see my countrymen fall behind in the race because of lack of enterprise or of shortcomings in education, and I am sure I speak the mind of the best men of our nation, who in no alarmist spirit, but in cool, calm judgment, declare that her doom is surely set, unless with the courage that has hitherto never failed us we rise up and provide for our people the means of the highest education, alike in their best interests as human beings, and as needful for the maintenance and development of her trade and industry.

The lines of William Watson in his "Coronation Ode" of 1902 are instinct with prophecy:

"Time, and the Ocean and some fostering star
In high cabal have made us what we are.

* * * * *

But now the day is unto them that know
And not henceforth she stumbles on the prize;
And yonder march the nations full of eyes.
Already is doom a-spinning, if unstirred
In leisure of ancient pathways she lose touch
Of the hour, and overmuch
Recline upon achievement, and be slow
To take the world arriving, and forget
How perilous are the stature and the port that so
Invite the arrows, how unslumbering all
The hates that watch and crawl."

SUMMARY OF THE DISCUSSION.

Professor HENRY J. SPOONER, M.I.Mech.E., A.M.Inst.C.E., F.G.S. (Regent Street Polytechnic), called attention to Mr. Reynolds's statement of the great debt owed to Germany with respect to incandescent gas and electric lamps and the development of gas and oil engines of large powers. He wished to put it on record that the electric incandescent lamp was the invention of an Englishman and that the use of blast-furnace gas in gas engines was first suggested by an Englishman. Incandescent gas had been largely introduced by the labours of George Keith, whom he was proud to number among his own past students.

Turning to Dr. Ewing's paper, Professor Spooner thought that by far the most important paragraph was that relating to mathematics. He entirely agreed with what Dr. Ewing had said on the question of the workshop. The college workshop could never be put forward as a substitute for the actual practice in works, but the first two or three years of the engineer's training could best be taken in an engineering college. Dr. Ewing had paid very little attention to the matter of machine design. The speaker thought there was no other branch of work that the student is ordinarily engaged upon which is so capable of cultivating the judicial function of the mind. That is where the young engineer fails in many cases to-day. A very vital point was the question of the living wage. He thought that employers now began to appreciate the true value of organised intelligence, and were prepared to pay reasonable wages to graduates from the university or a technical school.

Dr. HENRY DYER (School Board of Glasgow) wished to make a few remarks on the relation of theory to practice. He agreed with Dr. Ewing that there were great advantages in arranging for practical work at as early a stage of the training as possible. That had been, to a large extent, the British practice up to a few years ago. It was important that students should not go through a college course only to find out at the end of it that they had not the special qualities required for engineers. Great changes had recently taken place in the secondary schools, and a student entering the workshop at 16 or 17 is now capable of taking advantage of what he sees there. When his advice was asked, he

always recommended that a boy should remain at a secondary school until he was 16 or 17, and go from there direct to the workshop, attending evening classes for two or three evenings a week. After two or three years of apprenticeship he should proceed to the day classes of a technical college or the university, and at 21 or 22 he would have a fairly complete introduction to both theory and practice.

Turning to Mr. Reynolds' paper, he said that this showed that evening classes still had a great hold on the people of this country. So long as the present social and economic conditions continued, we should have to make the most of evening classes, although the arrangement might not be the best possible, and it would probably be a considerable time before we got rid of them.

Dr. GRIFFITHS (University College of South Wales, Cardiff) said that some might think that Mr. Reynolds was too pessimistic, but he believed that all who had thought about the subject must admit that there was truth in his representation of the comparative position of technical education in this country and Germany. If we could get public opinion on the side of education, difficulties would vanish.

Professor J. WERTHEIMER, B.Sc., B.A. (the University of Bristol), drew attention to the important point raised by Dr. Ewing as to the danger of too early specialisation. He spoke for the University which had been wicked enough to establish a professorship and to offer a degree in motor-car engineering. He agreed that too early a specialisation was undesirable. He did not think that, in the provincial universities with which he was acquainted, there was any too early specialisation in the essential subjects mentioned by Dr. Ewing. So far as he knew, it was not possible for any one to take an engineering degree in England without acquaintance with mathematics, mechanics, and strength of materials. Engineering is so wide and deep a subject that if a man is to do any good he must specialise. When he told the Rector at Charlottenburg that there was at the Imperial College a professor of electrical engineering, the Rector inquired whether the professor was out of his mind. At Charlottenburg they had a separate professor of each branch of electrical engineering. If anyone at Charlottenburg was to call himself Professor of Electrical

Engineering, they would be inclined to ask whether he was really sane.

He agreed with Mr. Reynolds in urging the necessity for greater concentration of the higher technical teaching in this country. We pepper the country with technical institutions, whereas in Germany or America they concentrate a large number of students in one institution and do much more good than we can.

Prof. BURSTALL (University of Birmingham) said that, when Birmingham University was removed from its old to its new quarters, he and two other gentlemen were sent by Mr. Chamberlain to America to investigate engineering education there, and they found a great deal that was worthy of consideration. For one thing they found the workshop system in colleges very finely developed and thought it worth copying. They also found a four years' course throughout Canada and the United States, and Birmingham is to-day the only British university which insists on a four years' course for the B.Sc. in Engineering. At Birmingham they concentrate their attention in the first two years on a thorough grounding in pure science, mechanics, physics, and chemistry, giving at the same time a certain amount of manual training in the various shops of the university. In the third or fourth year they attempt to teach technology. Very great importance is attached to the subject of machine designing. They are also gradually and steadily developing a special school of research to which they attach great value as a means of promoting the welfare of the students.

Perhaps it would be a comfort to Mr. Reynolds to know that he once happened to show to a professor of Charlottenburg some examination papers dealing with the thermodynamics of the gas engine and the professor said that he could not get his students to do such hard work as that.

Mr. WILLIAM ALLEN (Bedford) said that in 1902 he had made a tour through Germany and was nothing short of alarmed at the progress Germany had made in the matter of teaching her children. He saw a perfect revolution in their industries and that had been brought about chiefly through their education. He was in conflict with Dr. Ewing on the subject of workshops in colleges. He did not believe you could teach a man to be a practitioner in a college. The college workshops had not got the proper sort of teachers; he knew of some

workshops where the teachers were men whom he had himself dismissed because they were not worthy to work in a practical workshop. Further the college workshop had not sufficient money to keep up with the improvements which were being introduced daily into the systems of engineering, and they were not acquainted with the requirements of the trade. He therefore thought it was the duty of the colleges to impart scientific knowledge and leave the engineers to do the practical work.

Sir WILLIAM WHITE (late Director of Naval Construction and Assistant Comptroller of the Royal Navy) thought that Dr. Ewing's paper would do a great service throughout the Empire in fixing attention on the principles of engineering education. He agreed with Dr. Ewing that the success of any school must depend on the teacher and no man ought to attempt to teach engineering who is not practising engineering. The teacher must be allowed freedom to practise. He also thought that it would be a good thing for teachers and students that no teacher of engineering should be allowed to go on teaching until he had become stale. The teacher should go out into the world again to practise. He thought that it was in the preliminary education of the student that the German was superior to the British system. The student who entered at Charlottenburg was properly prepared, whereas in many of the engineering colleges in this country the first year has often to be devoted largely to making good the defects of the preparatory training.

He agreed with Dr. Ewing that the college should concern itself with the teaching of fundamentals; and research, while it should be always there, should not be allowed to interfere with the proper teaching of fundamentals. He agreed that we had much to learn from Germany and other countries, but unless we had the support of the employers it was impossible to rival the German results. He did not think it necessary that the machinery should be so perfect and up to date in the college workshop; he would rather have a machine defective in principle, and let the pupil discover its defects, than some very perfect machine. He had known professors boasting of a 100-ton testing machine, whose love of research carried them so far that they sometimes forgot their pupils.

Dr. COTTON (University of Birmingham) was anxious to remove a wrong impression which he thought

the overseas delegates might have gathered from Mr. Allen's remarks that in this country we were merely playing at workshops. He admitted that the workshop training given at a university could never rival the actual work done in commercial organisations. What was wanted was to give a young man a certain knowledge of materials and of tools, but not manual dexterity, which could not possibly be acquired in two or three years' time. The training of the college workshop was not intended to produce journeymen but to make men understand the difference between brass and steel, and the difference between the various qualities of metals and the tools which they use.

He repeated the appeal which the previous speaker had made to employers and commended the Scottish "sandwich" system, by which students devoted three months of their summer holidays to working in engineering works. They had tried the system in Birmingham but with only partial success. The students were willing to give up their time, but there was a lack of employers who were willing to give them facilities. He thought, however, that a change was now coming over the employers although they did not yet see the importance of scientific methods as much as the Germans had.

He was absolutely against the premium pupil system. It was better to let a young man go as an apprentice; in this way he feels that he is doing something and gets a sense of responsibility.

Dr. EWING in replying suggested that the reason for his boldness in the matter of mathematics which Professor Spooner had commended was probably that he himself was no mathematician. He had found in his own studies of engineering theory that he had been able to get on fairly well with such modicum of mathematics as he possessed. He agreed with Dr. Dyer that it was desirable to get the practical work as soon as possible. He thought that Mr. Allen was doing a little less than justice to the college workshop—possibly to the college workshop as it is, certainly to the college workshop as it might be and certainly also as it would be, if it complied with the conditions which he had laid down in his paper. It must be fitted with plenty of tools and with skilled instructors—which did not mean men who had been dismissed by Mr. Allen.

He referred to his experience at Osborne and Portsmouth in this respect, although, of course, the conditions

there are exceptionally favourable, as the Admiralty are able to equip their workshops in a way which would be impracticable in most of the colleges and were able to command the services of instructors who are skilled workmen. He wished that time had permitted him to say a little more about another aspect of his educational experiences at the Admiralty, the dockyard schools. These schools were able to undertake scientific training concurrently with the practical work of apprenticeship, and by eliminating the boy who is not taking advantage of the scientific training to give increased opportunities to the boy who does take advantage of it.

With regard to multiplication of professors which Germany was said to have adopted in order to prevent lunacy among them, he thought that the sanity or otherwise of the professor was not the first consideration. We must first consider the student, and if he is to have a multitude of professors each one professing and professing and professing in the particular bit of the subject to which he is restricted, surely the student's mind would give way. It is the limited capacity of the student that conditions the possibility more than any question of limitation on the part of the professor. He thought that Sir William White had indulged in a counsel of perfection in suggesting that the teacher who found himself getting stale should go into the world as a practising engineer.

He hoped that nothing he had said on the subject of research could lead any one to suppose that he would advocate the obvious mistake of setting an elementary student to undertake research. He was not an advocate of the heuristic method by which the child is set to re-discover for himself the principles of nature. He thought that we should take advantage of the heritage which is left to us and let research be limited to extending the boundaries of knowledge. He thought that the best research work was done by men who had a real grip of fundamentals, and the best grip of fundamentals was found in the men who were keen on research.

Mr. REYNOLDS was glad to find Sir William White a supporter of what was the main thesis of his paper, namely, that in Germany or Switzerland students are better prepared than ours are. So long as our secondary education is what it is in the point of quality and length of time for which the student is instructed, we could never get in our higher institutions the quality of student

that is desired or the quality which is found in the technical high schools on the Continent. He disagreed with Dr. Dyer in thinking a time would come when the evening school would no longer be looked upon as a part of the educational system of the country. He believed that the evening school had come to stay and that we should be able as time went on to give in evening schools a very much more advanced type of instruction, for which they found in Manchester a considerable number of college graduates thirsting.

With regard to the policy to be observed in advising students whether or not they should enter a technical college or university, it was a very difficult question to settle. An English student who gets into works is extremely loth to leave them. He dreads what may happen if he leaves to spend three or four years in a school or college because he has no confidence that the directors of the works will let him come back again. Although the "sandwich" system exists in Scotland there is hardly any evidence of it in Lancashire or Yorkshire and employers have shown no disposition to encourage it. He was glad to find that some of the speakers were of his opinion that we are still wanting in the practical sympathy of employers in helping us to give that time to the training of students that is absolutely necessary.

Friday, April 28th, 1911.

On Friday afternoon, April 28th, papers were read by Mr. R. Blair, M.A., B.Sc., Education Officer, London County Council, on "Trade Schools," and by Mr. Graham Balfour, M.A., Director of Education for Staffordshire, on "Continuation Schools," and a discussion followed. The papers and a *résumé* of the discussion are given below.

TRADE SCHOOLS.

By R. Blair.

In this paper the term "Trade Schools" is used in a restricted sense. It is applied to a recent development of day schools for boys or girls following immediately on the close of the elementary school career; the schools being so closely associated with the industry for which they are preparing their students that the preparation is looked upon as more or less a substitute for apprenticeship, at all events for the earlier years of apprenticeship.

Some 20 boys' schools (with 1,200 pupils) have recently been established in various parts of England. There are 12 in Ireland with 500 pupils. There are but few, if any, in Scotland. Girls' trade schools of the type described in this paper do not exist outside London.

I.

As this paper is mainly concerned with trade schools in London, a brief outline of the London educational system is necessary so that the trade schools, small in number as yet, may be seen in their appropriate setting.

The London County Council is the local education authority, with a statutory commission to promote the general co-ordination of all forms of education within the county area. The administrative county with its $4\frac{3}{4}$ millions represents but a part, though much the larger part, of what is popularly known as London. There is a daily attendance in the public elementary schools of 650,000 children, mostly between 5 and 14 (the years of compulsory attendance). In public or semi-public secondary schools (some maintained, some aided, and some not aided by the Council) there are on the roll 30,000 pupils, the nominal leaving age varying from 17 to 19. In the schools of the university, in the polytechnics and other technical institutions of a higher character, including the Imperial College of Science and Technology (some maintained, some aided, and some non-aided), there are hundreds of day students preparing for the higher careers in industry and commerce. There are also some 20,000 pupils (11 + to 15 +) in some 60 schools of a higher primary character called Central Schools. Each of these schools has an industrial or a commercial bias. Secondary education is not free. The Council offers free secondary education (subject to certain income limits of the parents) to all pupils who can take full advantage of it. Some 8,000 to 9,000 pupils of the secondary schools are in this way obtaining free secondary education, and most of them have a maintenance allowance. But this does not complete the tale of the larger educational activities. The whole of the elementary school system is permeated with a strong influence of recently-developed high social purposes finding scope for its activity in medical inspection, medical treatment, fresh air, and greater attention to feeding, cleanliness, and future occupation. And, further, there is the evening school system with its 160,000 students. (*See Appendix A., pp. 175-179.*) No

one can understand the system of technical education in England who has not fully grasped the meaning of the evening school work. In these evening schools are to be found those students who have felt most the need of education, those who are prepared to make the greatest sacrifices for it, and consequently those who gain most benefit from it. The efficiency of the system is, however, limited by the exhaustion of the long day's toil before the evening school begins.

The Council's annual expenditure on education approaches £6,000,000 a year; the rate is 1s. 9 $\frac{1}{4}$ d.

Behind the educational activity there is the background of London.

Of the total industrial population of England and Wales employed in factories and workshops London holds one-seventh. London engages one quarter of all the clerks in England and Wales. Besides this vast industrial and commercial system there are in London enormous services of a more or less unskilled character. One quarter of all the men and boys over 14 years of age are engaged in unskilled employments. Only about one-third of the children leaving the elementary schools enter a form of occupation which can by any stretch of imagination be called skilled. The remainder drift into unskilled occupations where for the most part they learn little that is useful, and where the mental and moral effects of their school training are too soon dissipated. Seventy per cent. of the London dock labourers have been born in London; the skilled trades are largely recruited by immigrants; newcomers from home and abroad constituting one-third of the London population. The system of indentured apprenticeship has largely disappeared. An exhaustive inquiry made for the Council in 1906 showed that it would appear to be only a waste of time and money to attempt to revive an obsolescent system.

In consequence of extensive competition and of extensive sub-division of labour, opportunities for an all-round training can scarcely be said to exist in the London workshops: In one direction the skill developed is extreme, but the training is either one-sided or no training at all, and a change in the circumstances of a trade generally means a new venture in life for many of its workers.

London is not the only city of which these things are true. They exist in Liverpool, in Birmingham, in

Leeds, and so on; but because of its great size, and the almost infinite variety of its activities, these things exist in a more intense degree in London; the struggle is greater, success is greater for the more adaptable; failure involves greater disaster. In London, therefore, with the endless possibilities of dislocation of occupations and with its enormous services of an unskilled character, the first essential quality for the worker is character to keep his head up under changing circumstances, and the second (perhaps the same as the first) is a genius in adaptability. Character and adaptability are the aim of the whole educational system. But in addition to all the general efforts in this direction something of a specific character can be done, and is being done, for those pursuing or intending to pursue an industrial career. The curriculum of the Central Schools has an industrial or commercial bias. The evening schools make some provision for those wholly occupied in the daytime. For those who can secure a half-day or two half-days per week of "time off" from their daily employment "part-time" classes are provided. For those who have not yet entered upon an industrial career, but who are prepared to give an undertaking to enter specific skilled occupations at or about 16 years of age, the trade schools have been established. There are far from enough trade schools for all. The output of the schools must not exceed the industrial demand. That is not yet large, but there is a notable increase on the women's side. It will, however, take some years for recognition of the value of the trade-school training, to secure a firm hold on employers generally.

II.

It has already been mentioned that in England, Ireland, and Wales (outside London) there are some 30 or so day schools for boys more or less of the type with which I am dealing to-day. As full particulars of most of these schools are to be obtained in three pamphlets issued by the Association of Technical Institutions, it will be sufficient for my purpose to refer to them in outline only. In origin, character, and objects the provincial schools are much the same as those in London. So far, however, as I can gather from written communications, there is, on the whole, in the London boys' schools a nearer approach to a substitute for apprenticeship. The London schools have also some distinct features, which will be referred to later. As a rule, the training is

for two years, immediately following on the conclusion of the elementary school course. All the schools outside London are designed for boys, and nearly all for boys intending to become mechanics in some form of engineering or building trade. The governing body is the ordinary governing body of the technical institute in which the school is held. As a rule, something like one-third of the time is devoted to actual workshop practice, one-third to mathematics and technical drawing, and one-third to literary subjects. The staff is composed ordinarily of an appropriate combination of the usual class teachers, and of men who have had workshop experience. Fees vary from 1s. a week to 3s. per term. In some cases there are scholarships for boys unable to pay the fees. The balance of expenditure beyond that provided for by fees is found from local funds or from Imperial assistance under the regulations of the Board of Education. In Ireland assistance from the Imperial Exchequer takes the form of three-quarters of approved expenditure. In the main, these day schools have been established because of a felt need. Sometimes, however, the fact of a technical institute, with its buildings, staff, and apparatus established for the purpose of evening instruction, and standing unused in the daytime has been one of the governing factors in the establishment of such day technical schools. It is not always wise to be governed by this factor. It is better to have some waste than to double it. Some of the schools are succeeding only fairly well; they have not had sufficient financial support or have not had sufficient sympathy in the way of contributions of eligible pupils from other schools not having a specialised objective. Others, where a close connection with industry has been made, are very successful. Some again have still to maintain a struggle against ideas that will only die with the present generation of workers.

A quotation from a communication received from one of them will give an illustration of these difficulties. The town in which the Trade School is placed is a large one, entirely devoted to engineering, and the school is biassed in that direction.

“The school has now been in existence three or four years and has been almost valueless so far as the placing of boys is concerned; employers are suspicious and prejudiced, and on the whole take up an attitude that the training provided is practically useless. They say the practical work is so unlike

the actual circumstances attending work in shops that the whole of the practical training has to be gone through again. They would prefer an education of such a type as to make boys alert and capable of independent effort. Their general criticism of the results of our present methods of education is that it produces a class of boy who has to be stood over and told at every turn what he is to do. Part of our difficulty in placing boys arises from the fact that large firms like . . . reserve almost the whole of their appointments for apprentices, for the sons of those who are already engaged in the works. About 20 of our boys have been placed, but this has not been due to what has been thought the excellence of the school so much as to personal pressure. The staff of the school is composed practically of graduates in science (engineering and general science), who have also in their early years served apprenticeships in workshops, so that the special criticism against the practical nature of the work does not seem to be justified. . . .

"I would specially emphasise the point made above, that our local employers would very much prefer to have a general education given of such a type as to produce independent and alert boys."

This view is not altogether the result of prejudice or ignorance on the part of employers. It is partly due to the fact that capacity to learn without too much supervision is of far greater value than any information or skill (technical or otherwise) which can be picked up by a boy in his early 'teens before he enters a workshop, and should be taken as a warning that there is a limitation to what the schools can do, and that it is only safe to proceed if that limitation has been fully recognised. And it must not be forgotten that commercial conditions, and especially the discipline of the workshop and the workroom, are entirely different from those in a school, and that the school must see that its conditions of training fit and do not unfit the student for the workshop or the workroom where things are made to sell in a competitive market.

III.

The London Trade Schools vary considerably in their objective and in the character of the work that is done. Some statistical details are given in Appendix B. (pp. 180-181).

The Schools for Boys are of two kinds : (a) Preparatory Schools for allied groups of trades, *e.g.*, woodworking, engineering, building trade, book production; and (b) those training for particular trades, *e.g.*, silversmithing, tailoring, cooks (men), and bakery. The Girls' Schools all aim at providing preparation for particular trades, and are intended to be a substitute for apprenticeship. Provision is now made for training in the following trades, viz., dressmaking, retail and wholesale ladies' tailoring, waistcoat-making, millinery, corset-making, upholstery, laundry, cooks (women), embroidery, and photography.

The Boys' Schools.

The oldest of the boys schools is Shoreditch (furniture trades), which, in certain important respects, stands somewhat by itself. The workshop instruction, including workshop drawing, occupies, roughly, one-third, one-half, and two-thirds of the school time in the first, second, and third years of the course, respectively. Of the remaining time, one-half is devoted to instruction in science, mathematics, and art, and one-half to English. In the engineering schools (Poplar, Paddington, and Hackney) less time is devoted to workshop instruction, about one-quarter of the whole time being spent in the workshops; about one-half to instruction in related subjects, such as drawing, mechanics, and mathematics, and less than one-sixth to English. In the School of Building (Brixton) boys taking the trade course, as distinct from the professional course, spend rather more time in the workshop, but in no case does the time spent in the workshop exceed half the school time.

The School of Bakery (the Borough Polytechnic) is in the main attended by the sons of master bakers.

The Beaufoy Institute differs from the others in giving rather more time to English and general subjects and rather less to science, mathematics, and drawing. The modification is justifiable, as the course of instruction is less specialised, for the boys are younger than in the other schools. In the Schools of Artistic Crafts (Central Schools of Arts and Crafts) between 9 and 10 hours a week are devoted to drawing and modelling.

The last of the schools to be established is a school for boy cooks. The work of this school is guided by an advisory committee of expert chefs. The object of the school is to instruct youths who desire to become

professional cooks and to train them by scientific methods in all branches pertaining to cookery and the making of pastry and confectionery. The kitchen is fitted up like the kitchen of a good hotel. The course of instruction lasts for three years.

The object of all the schools is to prepare boys to become intelligent workmen, with a fair chance of occupying later on the better-paid positions. The function of the schools is regarded as doing the preparatory work that there is no time to do properly under modern workshop conditions, and to send into the shops youths who have been taught to use both their hands and their brains and who will be in a position to make the utmost use of that experience which the workshop alone can give. The artistic craft schools and the school for boy cooks (Westminster Technical Institute) stand in a somewhat different position. In these occupations craftsmanship counts for more than it does in heavier trades, and a case can be made out for the devotion of rather more time to workshop practice.

The whole school atmosphere should be creative of a pride in workmanship and of faith in the power and value of the craftsman.

As regards the type of general education given, there is no doubt that it should, broadly speaking, spring out of and be related to the trade instruction. Something in this respect has been done; there is still much to do. The general education should be of such a character as to induce the reading sense, so that students may themselves be found independently seeking for information related to their crafts or trades. It should also seek to develop, at all events in the better students, the critical attitude not only towards quality of workmanship, but also towards the general life and thought of the craft or trade, and especially towards the industrial and social conditions under which the craftsmen live and work. Art is in one way easily related. The silversmithing boy or the young architect will draw objects or examples of the goldsmiths' or silversmiths' or architects' work. But the relation must be carried further: whatever the object, *e.g.*, a chalice, its purpose should be described and some time devoted (with examples or sketches) to showing how its fashion has followed the art of the times, and so on.

Mathematics is not treated too ambitiously. A few fundamental principles well driven home are considered

worth a hundred tricks; and an armful of notebooks filled with flighty or involved exercises whose application is remotely seen or remotely doubtful is generally regarded as representing but so much contribution to the intellectual rubbish heap. The science master who cannot show at once how much his curriculum differs, and why it differs, from that he would propose in an ordinary higher primary or lower secondary school is regarded as misplaced.

The work in history and literature should give the best of the students the historical sense which will enable them to appreciate the part their craft or industry is playing in the development of civilisation, and should induce them to explore the masterpieces of history and literature where the great craftsmen have so often found inspiration for their work.

Teachers of sufficient interest, of sufficient originality, of sufficient persistence, and sufficiently capable of applying the ordinary subjects of the curricula to each new trade included in a school's objective are by no means readily found; and this difficulty of finding the right kind of teacher is an additional reason for the slow development of the system.

A more detailed description of the work of one of the schools will serve to illustrate the nature of the work.

The School of Building (Brixton). Opened 1908.

(1) The prospectus states that "a day school for boys has been established at this institution, with the object of providing a sound scientific and technical training for boys preparing to enter the Building Trades and allied vocations."

Although it has not been suggested that this training should in all cases replace apprenticeship, the instruction given is that which modern conditions render almost impossible save at such an institution as this. In the case of boys whose parents are able to maintain and pay a premium for them, apprenticeship for a reduced period may follow at the termination of the three years' course. On the other hand, boys of poorer parents entering the trades or becoming draughtsmen, clerks in builders' and surveyors' offices, &c., are at the completion of their course in a position to commence work as apprentices or learners with much more advantage both to themselves and their employers than boys securing such appointments

immediately upon leaving the ordinary schools. The whole of the training is preliminary, and should be continued at evening classes in the Council's institutes or polytechnics.

(2) The course is for three years, and admission to the school is restricted to boys between 13 and 15 years of age on the 31st July of the year in which they enter the school and who have passed the sixth standard of an elementary school or its equivalent.

The curriculum, which is common to all students during the first year, and which is looked upon as a probationary period, includes Building Construction, Workshop Practice, Study of Materials, Workshop Arithmetic and Mathematics, Experimental Science, Geometrical and Plan Drawing and Lettering, Freehand Drawing of Building Details, English Literature, History—with special reference to industrial changes and the development of public and domestic architecture, Geography—with special reference to building materials, English Composition, and Business Correspondence. Briefly this is—

8	hours	per	week	Workshop Practice (General) ;
6	"	"	"	Technical and Drawing Office instruction ;
4	"	"	"	Elementary Science ;
10	"	"	"	English, Mathematics, and Art applied to Building ;
2	"	"	"	Physical Instruction.

At the end of the first year the principal advises the parents of the boys attending the school as to the most suitable vocation or craft to select for their sons ; this recommendation is based upon any special aptitude shown during the first year, reports from the masters, the character of the boy, and the position of the parents.

In the second and third years the courses are divided into two main sections : (a) the artisan course for Bricklayers, Carpenters, Masons, Plumbers, Painters, &c. ; (b) the higher course for Architects, Builders, and Surveyors. During these two years the instruction in Building Construction for all students is of a more advanced character, and the general Elementary Science with reference to Building Materials and Mechanics of Building is more directly applied. Pupils taking the artisan course specialise in the trade which they intend to follow. The pupils in the higher course receive weekly instruction in the various trades in rotation, and

Builders' Quantities, Architectural Drawing, and Land Surveying are added to the curriculum.

In the second year—

10 hours per week are devoted to the specialised instruction ;

6 „ „ to Technical and Drawing Office work ;

4 „ „ „ Elementary Science ;

8 „ „ „ English, Mathematics and Art applied to Building ;

2 „ „ „ Physical Instruction.

In the third year—

15 hours per week are devoted to the specialised instruction ;

5 „ „ to Technical and Drawing Office work ;

4 „ „ „ Science ;

4 „ „ „ English, Mathematics, and Art applied to Building ;

2 „ „ „ Physical Instruction.

(3) Towards the end of the third year, as opportunities arise, the most suitable are placed. Up to the present this has been done particularly satisfactorily direct from the school. The Principal is of opinion that it is undesirable to insist on the completion of the full term of three years, as it would be extremely difficult to place, or assist in placing, say, groups of 50 boys leaving simultaneously.

The nature of the school draws students from all over London, and in order to meet the needs of the boys there has been provided a cheap plain midday meal consisting of hot meat, two vegetables, and pudding, for which 4*d.* is charged per boy, and, in the case of cold meat, vegetables, and pudding, 3½*d.* per boy.

The workshop instruction is of such a nature as to render frequent bathing a necessity. A range of six shower baths forms part of the school equipment: the great demand for their use is an instance of their necessity, and speaks for their popularity. Personal hygiene is regarded as part of the training towards good citizenship. It is hoped that this love of cleanliness, and generally a high ideal of self-respect, may be continued in after life.

As a protection to clothing, the wearing of white overalls is insisted upon in all workshops.

Finally, wherever the instruction permits, such as in the workshops, drawing offices, &c., the conditions and type of work as nearly as possible approach those obtaining in builders' shops, architects' and surveyors' offices, &c. The instructors for this part of the work are drawn from the ranks of first-class craftsmen, who have had broad experience in shops, offices, &c., and who, therefore, are in a position to appreciate the conditions prevailing in the commercial world.

Girls' Schools.

The first trade school for girls was started in 1904, when the Governors of the Borough Polytechnic, acting on the advice of the late Mrs. Oakeshott, opened a trade class in waistcoat-making, receiving for this purpose a grant-in-aid from the Council. The Council's first organiser of women's technical classes, Mrs. Oakeshott, had discovered in the course of her investigations that the best class of waistcoat-making offered good wages to the workers, while, at the same time, there was very little facility for learning the trade, and certainly no arrangements for a systematic course of instruction.

There are at present six day trade schools for girls in London. In addition trade training is given in three schools for physically handicapped girls.

These schools provide instruction in eleven different skilled trades for women. The trades chosen are those which afford opportunity for efficient women workers to rise to positions of responsibility, which have been found to require a constant recruiting of skilled workers, while affording within themselves insufficient means of training young workers, and which lend themselves to class teaching.

Modern industrial conditions, while requiring intelligent and skilful workers, are apt to be wasteful of the skill and health of young workers, whose individual interests are often sacrificed to the immediate profits of the business. Long hours, sub-division of work, stress of competition, insecurity of tenure, press heavily on the girl struggling to equip herself as a skilled worker.

The task of a trade school for girls is not merely to teach the manual skill required in the trade workroom, but to supervise the development of the young worker both in health, trade knowledge, and character, so that she may be fit to hold her own in the industrial world.

A description of the work of one of the trade schools, viz., the London County Council Trade School, Bloomsbury, will serve to give an idea of what is being attempted. Five trades are taught in this school: the numbers of pupils in the classes range from 16-20. Four needle trades are taught, viz., dress-making, ladies' tailoring, corset-making and lingerie, and millinery. Photography is also taught. The course lasts two years. A girl can in this time only be trained for one trade. The age of admission is from 14-16. Girls enter either by scholarship, by award of free places, or by paying a fee of 30s. a year. Since the establishment of the school the demand for places by fee-paying students has been steadily growing. Of a total of 170 girls now in attendance, about half are scholars and the rest fee-payers. No girl is admitted who does not undertake to stay two years and to enter the trade at the end of the course. The school authorities, however, reserve the right to exclude any girl who proves incapable of attaining a certain standard of efficiency, or to change her trade if advisable. The first three months is a probationary period during which the pupil is carefully watched, and her suitability for the trade she has chosen is gauged. The importance of a right selection of trade cannot be over-estimated, and the school serves a useful purpose in selecting, as well as in training, girls for the work best suited to the capacity.

The school hours are from 9-5, Saturdays being free.

About two-thirds of the school time is devoted to trade work, the remainder being given to art and general education.

The trade teaching is in the hands of teachers who have obtained their knowledge of the trade in first-class business houses. As far as is possible in a classroom, workroom conditions are set up. The equipment and arrangement of the room is similar to that of a trade workroom.

Workroom methods and trade standards of work are adopted, the chief difference being that, whereas in a workroom many workers may combine to produce one article, in a classroom each girl is responsible for and required to carry through all the processes of the article she makes. Very little formal work is done; as far as possible all completed work is real work made for a particular purpose. The ingenuity of the teachers is

called upon to provide sufficient variety of work to provide practice and experience of the various branches of the trade which each girl must learn. A record is kept of the trade work of each girl and of the time spent in producing it. Throughout the course, each girl is made to bear in mind that she must at the end have a market value, and for the credit of the school this must not be below the average agreed upon. It is recognised that speed must be combined with skill if the latter is to command a price.

The trade school is kept in as close connection with the trades as possible—members of the trades visit the school, inspect and criticise the work of the girls in their presence, and do not spare them praise or blame according to their merits. The connection with the trades is becoming closer as the school becomes more firmly established, and the girls who pass through the school pass into the trade workrooms. The demand from employers for school-trained girls already far exceeds the annual output of girls.

The art teaching, English literature, industrial history, composition, arithmetic, and hygiene lessons which, together with physical exercises and singing, fill the rest of the school time, are all arranged as far as possible to supplement the trade training. The literature lessons are aimed at awakening a love of wholesome reading, the history at making clear the system of which the industrial worker forms part. Composition lessons include business correspondence, and arithmetic lessons deal with workroom problems. Hygiene lessons are aimed at being of a practical work-a-day kind, dealing in the knowledge of personal and public health, which should be familiar to the worker. Careful records are kept of each girl's antecedents, her progress through the trade school, her physical condition and development, and her subsequent career. After she leaves every effort is made to keep in touch with her and, with very few exceptions (*e.g.*, girls who have moved away from London), the lady superintendent of the school is able still to watch the fortunes of her old girls. An old girls' club flourishes, which meets at the school. Arrangements are made for the senior girls to be present at old girls' meetings, in order that they may learn direct from their former schoolfellows what the work-a-day world is like.

No undertaking is given to find places for the girls who leave the school, but it is a matter of pride with all

the trade teachers to place out their girls. Many applications are made by employers for girls, and this year more direct applications were received than could be filled. All firms applying are visited by the trade teacher, who, in consultation with the lady superintendent, picks out the girl she considers suitable for the vacancy, and offers her at the wage she is judged to be worth. It is found that a girl's career depends greatly on her making a successful start in her first place. The experience of the trade teachers proves invaluable both in judging of the suitability of the places found and in helping the girls to meet the difficulties and discouragements they may at first encounter in the workroom.

The trade school course enables girls to enter the trade workrooms as junior assistants; thus stepping over the earlier stages of apprentice and improver.

The usual initial wage is now about 10s. a week. Each year it is proving more easy to find places for the girls and a larger field of employers are anxious to engage them. The initial wage tends to rise. The first years that girls were placed out 8s. a week was the average. This year 12s. and 14s. have been received in many cases.

Girls who have passed through the school appear to have no difficulty in keeping in steady work and in getting promotion. They are favourably commented on both for their workmanship, good manners and reliability, and in cases where several have worked together, for the improvement in the tone of the workroom. In many cases they have encountered jealousy, but in very few have they been unable to live this down. Employers who have had trade school girls send back for more. In several cases this year girls have left the trade school to work under their former schoolfellows now promoted to be first or second hands. It was found in the first years of the trade school that not a few girls after leaving the school broke down in health in the strain of the workroom. Increased care is given to physical fitness. All girls are examined on entry, and re-examined at intervals during their trade school career. Parents are required to get carried out necessary treatment advised by the school doctor. Eyes, teeth, crooked backs, &c., are attended to and opportunities for remedial exercises are given in school. The improvement in physical well-being of the girls during their sojourn at the school is very marked. The school aims at keeping in touch both with the elementary and other schools from which the pupils

are drawn, and also with the parents of the girls themselves. Two or three times a year an open day is held for headmistresses and other teachers, who are invited to bring intending pupils, as well as for the parents and friends or the girls. Exhibitions of work, to which the trade are invited, are also held annually.

Selection.—As will be seen from the statistical table in Appendix C, the pupils are free scholars or fee-payers. The scholars (subject to certain income limits on the part of their parents) enjoy also a maintenance grant based generally on what an apprentice's wages might be expected to be. The selection is made by public competitive examination in arithmetic, English, and other subjects, which are varied according to the trade concerned among candidates recommended by headmasters or headmistresses. In some cases the selection is not completed until after personal interview. In all cases the successful candidates must be recommended by the medical officer as "fit." The medical examination bears in mind the peculiar effect on workers in particular trades. The examination is, however, designed to exclude only those physically incapacitated. As public opinion ripens, modification of the methods of selection will be introduced. A perfect method of selection has not yet been discovered. It is obvious that not only should candidates be rejected who are incapacitated from working at the particular trade concerned, but that all engaged in the selection—parents, teachers, organisers, medical officers—should with at least a general knowledge of the requirements of the trade direct their attention to selecting those who possess qualities most appropriate for that trade. With such selection and with curricula based on experience, the trade schools should be able to turn out the aristocracy among the workers.

Cost.—In the case of most of the provincial schools a statement of cost has not been available. It has been found difficult to make an appropriate adjustment between the expenses of the trade school and those of the technical institute in which the school is housed and whose apparatus the school uses. The cost of the London boys' schools, all housed in technical institutes or schools of art, is also found difficult to apportion, but it may be said that the net cost per head varies from £15 to £21.

I am able to give the full cost for the session 1909–10 of the Bloomsbury Trade School for Girls, which is housed

in its own premises, and is in every respect an independent school unit.

L.C.C. Trade School for Girls, Bloomsbury.

Session 1909-10. No. of Students, 173.

RECEIPTS.

	£	s.	d.
Sale of materials - - -	164	0	0
Fees - - - - -	63	0	0
Stock in hand (estimated) -	160	0	0
Grant (estimated) - -	685	0	0

£1,072 0 0

EXPENDITURE.

	£	s.	d.
Equipment - - - -	29	0	0
Materials - - - -	523	0	0
Salaries - - - -	1,829	0	0
Other expenses - - -	79	0	0
Scholarships (85) - -	876	0	0
*Establishment charges -	318	0	0

£3,654 0 0

Gross cost per head, £21 2s. 6d.

Net cost per head, £14 18s. 0d.

IV.

The success of the schools is largely attributable to two salient features of the system: (1) the thoroughness of the investigation which is made into the conditions of a trade before seeking to establish a school or a class, and (2) the appointment of consultative committees of experts.

As to (1) the broad lines of the inquiry in connection with girls' schools are to ascertain what industries are open to women, the nature of the work they offer, and how far education can benefit both the industry and the worker. Information is collected by the organiser

* Does not include loan charges on buildings.

by personal visits to employers of every kind in each industry; workrooms are seen and foremen and workers as well as heads of firms are consulted. The inquiry is in fact pursued exhaustively until the organiser has a full understanding of the existing conditions of the trade, the likelihood of their permanence (geographically or otherwise), and the kind of skill that modern industry and modern social life are demanding. Every possible step is taken to make co-operation with employers a reality.

As to (2) a consultative committee of experts has been formed in the case of each trade at each of the girls' schools. The functions of this committee are solely advisory. They advise in the selection of the trade teachers; in the apparatus and scale of the operations. Either singly or collectively, they visit the schools, inspect the work, offer criticism on the work of the girls in their presence, and do not spare them praise or blame according to their merits. In this way the school and the trade meet on common ground and each learns from the other. The members are chosen not only for their knowledge of the trade, but also because of their interest in the social uplifting of women workers.

In passing it may be said that the trade representatives have not sought and have not had any preferential claim to engage girls when leaving the school. In the case of the boys' schools, the consultative committees are of a more general character. So far five such committees have been appointed by the Council—(1) Bookbinding, (2) Book Production, (3) Goldsmithing, Silversmithing, and Jewellery, (4) Tailoring, and (5) Furnishing Trades. These committees are representative of the Masters' Associations, of the Workmen's Associations, and of the Council. The Council's representatives are also chosen from among persons of experience in the trades concerned, all of them being well-known experts.

The committees act solely in an advisory capacity, and their duties briefly are to visit the classes (evening as well as day), and report thereon to the Higher Education Sub-Committee annually or oftener if necessary; to suggest any modifications desirable to render the instruction more efficient and practical; and to advise as to the distribution of classes and their development, the qualifications which should be required of candidates for employment as teachers, and the equipment for the classes.

The composite nature of the membership of these committees has been one of their great values. Formed as they are of representatives of the Chambers of Trade and Workmen's Associations, members of City Companies connected with the craft concerned, members of important arts and crafts organisations, and of those engaged in the distributing trades, the bringing together of such men, holding, as they often do, divergent views on art and technical training, but yet keenly interested in its advancement, has resulted in an interchange of ideas and an appreciation of ideals which have frequently been productive of most useful suggestions for the development of the work. On the one hand there are among them those who contend that the training should be entirely utilitarian, and that the classes should merely provide such training as cannot be given in the workshop, or as may be required to meet the demand of the fashion of the day. On the other hand there are those who represent the æsthetic side, who are equally insistent on the primary importance of training in the traditionary styles of art, and a knowledge of the history of the crafts concerned; on the necessity for training students to apprehend wherein beauty exists; and on the fostering and encouraging of individual expression of ideas. They urge that the schools should not only aim at training highly competent workmen, but should also be a means of cultivating a taste for beauty, and of diffusing a sound knowledge of craftsmanship, and of thus becoming a lever by which the general standard of æsthetic taste, not only of the worker but also of the distributor, and the purchaser may be slowly but surely lifted. The interchange of ideas which is thus rendered possible by the meetings of the members not infrequently results in the recognition on the one hand of the value of technical training from the utilitarian point of view, and on the other hand of its value in raising public taste and thus creating a demand for a better and higher type of work; and of the formulation of proposals for securing these ends.

V.

In conclusion it may be said that while both the boys' schools and the girls' schools have achieved success, that of the girls, while possibly the more easily obtained, has been the more striking. Towards this result the

work of Mrs. Oakeshott, the Council's first organiser, contributed much. Mrs. Oakeshott's career of great promise was, unfortunately, prematurely closed in 1907. The staff of the girls' schools consists of women devoted to their work. They are all anxious to share in the social uplifting of women workers, and they are buoyed up with the experience of seeing their products "placed" with reasonable prospects not only of earning a good living, but of rising to responsible positions. It may be difficult to maintain the present high standard of devotion and enthusiasm.

APPENDIX A.

RETURN OF OCCUPATIONS OF STUDENTS ATTENDING EVENING
CLASSES IN THE ADMINISTRATIVE COUNTY OF LONDON
DURING THE SESSION 1908-9.

The statement shows, as accurately as possible, the number of workers, men and women, in the various professions, occupations, and trades, who were, during the session 1908-9, attending evening classes in educational institutions in London, and the total number of persons, according to the returns based on the 1901 census, engaged in those industries. The list of occupations was not based on the classifications of the census return, but was drawn up after consultation with the principals of various polytechnics and technical institutes aided and maintained by the Council, and represents the best that can at present be done with the information given on the students' enrolment forms. It should be noted that the figures in the second column do not necessarily imply that the students are attending classes which have a direct bearing on their occupations, although it may be assumed that, in a very large proportion of the cases, that is the fact.

Profession, Occupation, or Trade.		Number of Persons in attendance at Evening Classes.	Number of Persons engaged in the respective Occupations according to the Census Return, 1901.	
			Under 20 Years of Age.	Over 20 Years of Age.
I.—MEN.				
(1) Building Trades :—				
Architects, surveyors, draughtsmen, and clerks of works.	1,209	216	2,238	
Builders' clerks and other assistants -	592	Not specified.		
Bricklayers - - - - -	228	1,143	12,583	
Carpenters and joiners - - -	1,492	3,834	29,100	
Painters and decorators - - -	464	1,814	33,960	
Plasterers - - - - -	107	622	4,538	
Plumbers - - - - -	834	2,053	8,713	
Stonemasons and carvers - - -	291	507	4,496	
(A) Other artisans - - - - -	130	1,251	15,101	
(2) Electrical and mechanical engineering, shipbuilding, and metal trades :—				
Electrical instrument and apparatus makers.	294	2,526	9,139	
(B) { Telegraphists } { Telephonists } { Wiremen }	{ 566 285 345 }	830	2,373	
Telegraph and Telephone service.				
Brass finishers - - - - -	244	771	2,857	
Boiler makers, platers, and rivetters -	167	579	2,710	
Fitters, turners, and machine men -	2,201	1,517	11,879	
(C) Metal plate workers - - - - -	341	2,645	10,878	
Motor and cycle engineers - - - - -	412	645	1,802	
Chauffeurs - - - - -	85	12	56	
Pattern makers and moulders - - - -	268	144	571	
Shipwrights - - - - -	57	458	3,273	
Smiths (blacksmiths and strikers) -	346	1,274	9,780	

Profession, Occupation, or Trade.	Number of Persons in attendance at Evening Classes.	Number of Persons engaged in the respective Occupations according to the Census Return, 1901.	
		Under 20 Years of Age.	Over 20 Years of Age.
(2) Electrical and mechanical engineering, shipbuilding, and metal trades— <i>cont.</i> Other occupations under this head for which separate census statistics are not obtainable:—			
Draughtsmen - - - -	695		
Electrical engineers - - -	1,471		
Mechanical engineers - - -	2,156		
Others - - - -	397	5,027	24,212
(3) Civil engineering:—			
Civil and mining engineers - -	229	107	2,522
(4) Wood and furniture trades:—			
Cabinet makers - - - -	1,078	2,505	13,709
Coach, van, and car builders and wheelwrights.	269	875	8,726
French polishers - - - -	210	1,290	5,593
Upholsterers - - - -	295	802	4,342
(D) Other artisans - - - -	320	3,495	17,904
(5) Artistic crafts:—			
Designers, artists, and illustrators - -	677	Not specified.	
Goldsmiths and silversmiths - -	210	1,128	5,677
Jewellers - - - -	380		
Enamellers - - - -	19		
Engravers, chasers, and die sinkers - -	297		
Other art metal workers - -	96	Not specified.	
Stained glass workers - -	67		
Glass-blowers and workers - -	45		
Sign writers - - - -	114		
Pottery and porcelain workers - -	17	323	1,403
Wood carvers and gilders - -	217	919	4,484
Art leather workers - - -	30	Not specified.	
(6) Chemical industries:—			
Persons engaged in chemical manufactures and trades.	276	1,991	7,419
Persons engaged in analytical and consulting work.	87	Not specified.	
Electro-platers, white-metal manufacturers, and pewterers.	41	170	1,028
(7) Metallurgical industries:—			
Persons engaged in metallurgical manufactures.	13	Not specified.	
Persons engaged in analytical and consulting work.	16		
(8) Optical trades:—			
Manufacturing opticians (scientific instrument makers and opticians).	125	457	1,943
Sight-testing opticians - - -	29	Not specified.	
(9) Scientific instrument makers (other than electrical instrument makers).	287	386	1,809
(10) Musical instrument makers - - -	114	1,312	5,828
(11) Horological trades - - - -	135	359	3,144
(12) Legal occupations (barristers, solicitors, and law clerks).	511	2,098	13,345
(13) Clerks - - - -	29,569	25,514	78,511
(14) Salesmen, agents, insurance agents, managers, and travellers.	1,923	10,579	87,891
(15) Warehousemen - - - -	1,620	886	4,405

Profession, Occupation, or Trade.	Number of Persons in attendance at Evening Classes.	Number of Persons engaged in the respective Occupations according to the Census Return, 1901.	
		Under 20 Years of Age.	Over 20 Years of Age.
(E) (16) Clothing trades - - -	2,023	4,577	33,826
(17) Leather trades :—			
Leather manufacturers and tanners -	108	1,212	6,855
Boot and shoe manufacturers - -	539	2,263	22,330
Saddle and harness makers - -	114	489	3,433
Other leather trades - - -	126	Not specified.	
(18) Printing and lithographic trades (includes paper and stationery trades).	2,794	9,362	35,505
(19) Photographic trades :—			
Photography - - - -	246	352	1,883
Photo-process work - - -	280		
(20) Bookbinding (machine work) - -	181	1,033	5,108
„ (forwarding) - - -	77		
„ (finishing) - - -	253		
(21) Food supply trades :—			
Bakers and confectioners (including dealers).	591	2,989	16,197
Grocers - - - -	342	3,285	12,424
Other food supply trades - - -	556	14,117	89,750
(22) Furriers - - - -	117	352	2,408
(23) Miscellaneous trades - - -	1,211	Not specified.	
(24) Teachers - - - -	1,942	648	7,274
(25) Unskilled occupations :—			
Civil Service (telegraph messengers, postmen, and sorters).	2,346	4,293	9,712
(F) Other messengers and errand boys -	3,907	29,061	21,185
Van boys - - - -	571		
Labourers - - - -	2,840	13,745	126,545
Caretakers, and office, park, lodge, gate, &c. keepers (not Government).	17	39	5,260
No occupation stated (includes students).	9,645	197,260	76,656
(26) Occupations not named above :—			
Miscellaneous occupations - -	1,807	Not specified.	
Civil Service (officers and clerks) -	560	2,412	13,272
Coachmen, grooms (not domestic), and cabmen.	76	2,072	30,785
Police - - - -	3,318	4	12,019
Merchant Service, seamen, pilots, and boatmen on seas.	34	815	7,346
Bargemen, lightermen, and watermen -	27	600	5,041
Soldiers - - - -	287	3,471	10,489
Missionaries, &c. - - -	27	38	1,036
Dentists (including assistants) - -	113	145	1,100
Authors, journalists, shorthand writers, &c.	54	58	3,408
Gardeners (not domestic), nurserymen, seedsmen, and florists.	258	539	6,319
Wigmakers and hairdressers - -	139	1,014	5,996
Chemists and druggists - - -	31	566	4,520
Railway employees - - -	98	2,947	17,697
Domestic servants - - -	37	8,021	40,205

Profession, Occupation, or Trade.	Number of Persons in attendance at Evening Classes.	Number of Persons engaged in the respective Occupations according to the Census Return, 1901.	
		Under 20 Years of Age.	Over 20 Years of Age.
(26) Occupations not named above— <i>cont.</i>			
Tobacco manufacture - - -	85	568	2,670
Sanitary inspectors - - -	22	Not specified.	
Firemen - - -	33		
Librarians - - -	59		
Total number of men - -	92,944	391,411	1,098,106
II.—WOMEN.			
(a) (1) Domestic servants - - -	2,855	62,220	192,804
(2) Dressmakers - - -	4,216	16,283	45,513
(3) Laundrywork - - -	411	8,604	38,758
(4) Tailoresses :—			
Men's - - -	879	9,289	23,825
Ladies' - - -	765		
(5) Printing, stationery, and bookbinding trades.	1,906	13,318	17,094
(6) Milliners - - -	1,474	4,039	7,121
(7) Upholsterers - - -	255	1,028	2,195
(8) Artificial flower makers [and feather mounters].	398	600	1,737
(9) Corset makers - - -	192	669	1,245
(10) Hairdressers and wigmakers - - -	133	240	521
(11) Surgical appliance makers - - -	104	243	329
(12) Artistic crafts :—			
Designers - - -	184	Not specified.	
Lace makers and menders - - -	46	116	322
Art needleworkers and embroidresses - - -	381	Not specified.	
Jewellery and precious metal workers - - -	121	219	366
Woodcarvers - - -	12	126	121
Other artistic crafts - - -	260	Not specified.	
(13) Telegraph and telephone operators - - -	3,234	674	1,316
(14) Clerical occupations, &c. :—			
Clerks - - -	7,147	6,176	13,449
Civil servants - - -	594	583	5,213
Saleswomen - - -	1,653	6,900	19,722
Stock-keepers - - -	172	Not specified.	
Messengers and errand girls - - -	74		
(15) Nurses (sick nurses and invalid attendants, midwives).	1,042	134	16,076
(16) Photographers, retouchers, &c. - - -	179	185	518
(17) Fine needleworkers - - -	223	Not specified.	
(18) Machinists - - -	1,311		
(19) French polishers - - -	112	520	578
(20) Boot and shoe makers - - -	229	1,942	4,138
(21) Fancy leather trades (curriers, tanners, and leather goods makers).	177	971	1,005
(22) Confectioners - - -	304	2,280	2,174

Profession, Occupation, or Trade.	Number of persons in attendance at Evening Classes.	Number of Persons engaged in the respective Occupations according to the Census Return, 1901.	
		Under 20 Years of Age.	Over 20 Years of Age.
(23) Caterers, &c. - - - -	237	9,814	32,428
(24) Furriers - - - - -	215	610	1,849
(25) Miscellaneous trades - - -	2,283	Not specified.	
(26) Teachers * - - - - -	5,362	3,253	17,091
(27) No occupation stated (including students)	26,721	264,227	940,810
(28) Occupations not named above :—			
Miscellaneous occupations - -	1,857	Not specified.	
Charwomen - - - - -	27	642	25,309
Dyers - - - - -	33	283	562
Paper box and bag makers - -	472	1,356	4,148
Missionaries, &c. - - - -	41	25	1,483
Tobacco manufacture - - - -	580	2,587	2,087
Chemists' assistants and dispensers -	49	319	516
Total number of women -	68,920	420,475	1,422,423

(A) Builders ; slaters and tilers, paperhangers and whitewashers ; gasfitters ; locksmiths and bell-hangers.

(B) The census figures probably include messengers employed by telegraph companies.

(C) Tin-plate goods makers ; brass and bronze workers ; others.

(D) House and shop fittings makers ; undertakers and funeral furniture makers ; willow, cane, and rush workers and basket makers ; wood turners ; wooden box and packing case makers ; sawyers ; lath, wooden fence, and hurdle makers ; coopers and hoop makers and benders ; cork and bark cutters and workers ; other workers in wood.

(E) Tailors ; milliners ; dressmakers ; shirt-makers and seamstresses ; makers of hats, caps, &c., other than straw or felt ; umbrella, parasol, and stick makers.

(F) Messengers, porters, watchmen, &c. (not railway or government).

(G) Domestic indoor servants in hotels and lodging and eating houses ; other domestic indoor servants ; other domestic service.

APPENDIX B.

TABLE SHOWING TOTAL NUMBERS OF PUPILS IN DAY TECHNICAL SCHOOLS FOR BOYS AND IN DAY TRADE SCHOOLS FOR GIRLS FROM THE SESSION 1905-6 TO 1910-11.

(i) DAY TECHNICAL SCHOOLS FOR BOYS.

September to July.

Institution.	Subjects.	1905 -6.	1906 -7.	1907 -8.	1908 -9.	1909 -10.	1910 -11.
<i>Maintained.</i>							
Beaufoy Institute -	Unspecialised	---	---	---	---	35	55
Central School of Arts and Crafts.	Book-production : Silversmiths' work.	---	10	22	26	36	46
Hackney Institute -	Engineering	---	---	---	---	---	59
Paddington Technical Institute.	Do.	---	34	46	38	49	42
School of Building -	Building	---	---	---	45	81	90
School of Engineering and Navigation.	Engineering	---	21	47	57	70	76
Shoreditch Technical Institute.	Furniture and wood-working trades.	142	132	124	123	129	96
Westminster Technical Institute.	Cookery	---	---	---	---	---	15
<i>Aided.</i>							
Borough Polytechnic Institute.	Engineering and Metal Trades.	---	---	---	179	194	200
Do. do.	School of Bakery and Confectionery.	48	45	54	45	51	36
Regent Street Polytech- nic Institute.	Tailoring	---	---	---	---	8	21
Totals - - - -		190	242	293	513	653	736

(ii) DAY TRADE SCHOOLS FOR GIRLS.

Easter to Easter.

Institution.	Subjects.	1905 -6.	1906 -7.	1907 -8.	1908 -9.	1909 -10.	1910 -11.
<i>Maintained.</i>							
Paddington Technical Institute.	Dressmaking -	—	18	34	35	28	37
Shoreditch Technical Institute.	Upholstery and wholesale costumes.	—	48	81	87	79	83
Trade School for Girls, Bloomsbury.	Dressmaking -	}	—	50	126	177	166
	Millinery -						
	Ladies' tailoring -						
	Corsetmaking -						
Trade School for Girls, Hammersmith.	Photography -	}	—	—	51	86	94
	Dressmaking -						
	Millinery -						
	Upholstery -						
<i>Aided.</i>							
Borough Polytechnic Institute.	Dressmaking -	}	60	87	98	139	131
	Ladies' tailoring -						
	Waistcoat-making.						
	Upholstery -						
Woolwich Polytechnic -	Laundrywork -	}	30	53	58	96	109
	Dressmaking -						
	Ladies' tailoring -						
Totals -	- - - -	—	156	305	455	605	620

APPENDIX C.

RETURNS SHOWING THE NUMBER OF FEE-PAYING PUPILS, SCHOLARSHIP HOLDERS, AND FREE STUDENTSHIP HOLDERS IN THE DAY TECHNICAL SCHOOLS FOR BOYS AND DAY TRADE SCHOOLS FOR GIRLS IN THE COUNTY DURING THE SESSION 1910-11.

(i) DAY TECHNICAL SCHOOLS FOR BOYS.

September to July.

School.	Subject.	Scholarship Holders.	Free-Studentships.	Fee paying Pupils.	Totals.
<i>Maintained Institutions.</i>					
Beaufoy Institute - -	Unspecialised - -	35	--	20	55
Central School of Arts and Crafts.	Silversmiths - -	14	3	8	25
	Book production - -	20	—	1	21
Hackney Institute - -	Engineering - -	16	—	43	59
Paddington Technical Institute.	Do. - -	18	—	24	42
School of Building - -	Building - -	52	10	28	90
School of Engineering and Navigation.	Engineering - -	50	5	21	76
Shoreditch Technical Institute.	Furniture and wood-working.	50	2	44	96
Westminster Technical Institute.	Cookery - - -	5	—	10	15
<i>Aided Institutions.</i>					
Borough Polytechnic Institute.	Engineering and Metal Trades.	73	4	123	200
Do. Do. -	School of Bakery and Confectionery.	1	—	35	36
Regent Street Polytechnic	Tailoring - -	—	—	21	21
Total - - - -		334	24	378	736

(ii) DAY TRADE SCHOOLS FOR GIRLS.

Easter to Easter.

School.	Subject.	Scholar- ship Holders.	Free Student- ships.	Fee- paying Pupils.	Totals.
<i>Maintained Institutions.</i>					
Paddington Technical Institute.	Dressmaking - -	14	3	20	37
Shoreditch Technical Institute.	Upholstery - -	18	5	9	32
Trade School for Girls, Bloomsbury.	Wholesale costumes	20	9	22	51
	Dressmaking - -	16	—	23	39
	Ladies' tailoring -	23	3	8	34
	Corsetmaking - -	15	3	8	26
	Millinery - -	18	2	19	39
Trade School for Girls, Hammersmith.	Photography - -	15	3	10	28
	Dressmaking - -	16	3	19	38
	Millinery - -	14	2	18	34
	Upholstery - -	17	2	3	22
<i>Aided Institutions.</i>					
Borough Polytechnic Institute.	Dressmaking - -	15	13	6	34
	Ladies' tailoring -	17	12	7	36
	Waistcoat-making -	15	1	3	19
	Upholstery - -	18	7	5	30
	Laundry work - -	12	—	—	12
Woolwich Polytechnic Institute.	Dressmaking - -	32	4	38	74
	Ladies' tailoring -	9	15	11	35
Totals	- - - - -	304	87	229	620

Additional girls' classes in professional cookery and trade embroidery and in wholesale costume-making are about to be established.

CONTINUATION SCHOOLS.

By Graham Balfour.

To-day, in England, all who think much about the subject are agreed that education ought not to cease at the age of 13 or 14 when children leave the elementary school. We desire that it should be continued for a further period which should be limited only by reference to capacity and an ardour to learn.

The name continuation school is of extremely modern origin. A most interesting chapter might be written on the use of the word "continue" in connection with English education, for in it is involved part of the history of at least two important controversies, those which raged round the Revised Code in 1862, and in 1901 round the Cockerton judgment. But for this we have no time to-day; it will be written, I hope, before long by our brilliant historian of education, Professor Sadler, to whose

kindness I owe a most illuminating note upon the subject, and with whose invaluable book on Continuation Schools, published four years ago, you are all doubtless familiar. I will here only note that the phrase continuation school is not now in official use at the Board of Education, although from 1893-1901 the Evening School Regulations were known as the Code of Regulations for Evening Continuation Schools, while the Preface spoke of the need for children leaving the day school being encouraged to *continue* their education at evening schools. The term having now no official sanction, although in frequent use, is loosely employed at times for nearly all classes between the elementary schools and the universities, apart from the secondary schools. I propose to limit its use to-day chiefly to the earlier years of that period and to the teaching which runs parallel in time to the last two or three years spent at the best secondary schools, *i.e.*, the education of boys and girls between the ages of 14 and 18.

I do not intend to weary you here with any details of the organisation of our educational system. In my experience—and besides being held responsible for the administration of a large and diversified county area with many urban as well as rural districts, I have the honour to be a member of the Education Committee of a large county borough—it is the difference between city and country *conditions* that tells, rather than the difference between urban and rural *authorities*. The prime necessity for efficiency is that all areas for higher education should be of sufficient size to provide an adequate variety of schools and institutions and classes, and to find full employment for highly qualified and in some cases highly specialised teachers. To speak in general terms it is the geographical conditions which render the solution of the evening school problem relatively easy or difficult. Even in the largest of cities (though it is perhaps necessary to remind you here that London educationally is a county and not a city, and is in any case without a parallel,) in the largest of cities trains and tramways render distances of small account, and the dense populations furnish pupils in such numbers that classes can easily be gradated, and specialised instruction can be provided in all grades. Teachers again are easy to obtain, and can be engaged for their whole time. About buildings there is little trouble, inspection is easy; about secretaries and managers no difficulty exists. A number of employers can more

readily be induced to grant special facilities for attendance. The work in cities and in towns has difficulties of its own beyond doubt, a boom in trade, for instance, will, under existing conditions, shatter the attendance for a whole session. The best continuation schools are very far from perfect, and the scale and standard of the work falls very short of the ideal. But here it is with the pupils, or rather with the should-be pupils, that the fault lies. So far as the continuation classes are attended in the large cities and in the towns, they have done and are doing excellent work, and it is as we get further and further from the towns, past the suburbs and out to the remote villages, that the obstacles become almost insuperable. Fortunately the numbers there concerned are less, and it is least difficult to introduce continuation teaching where the greatest number of those for whom it is needed can receive it.

The authorities then are in most cases ready and willing to provide further education. When they address themselves to their task, five questions arise :—

- A. Who ought to go to continuation schools ?
- B. Where should the schools be held ?
- C. What should be taught in them ?
- D. When should the instruction be given ?
- E. Who are to be the teachers ?

To these questions no man living could possibly hope to offer answers of universal application. It seems better therefore to answer—so far as one can answer at all—definitely out of practical experience rather than with unreal abstractions. If my replies should meet none of the difficulties with which you in other climates and under other conditions have to reckon, at least I hope they may arouse discussion and give rise to suggestions.

A.—Who are to go ? The simplest and most complete answer is—Everybody on leaving an elementary school. Those who leave secondary or private schools at too early an age should also be required to attend unless they can satisfy a reasonable educational test.

At the present time, however, we are very far from realising this ideal. The latest figures of the Board of Education show that in 1909, there were in England on the registers of the public elementary schools nearly 3,000,000 children of the age of seven and over but under the age of 12, that is about 600,000 in each year. The same returns show that the number of young persons aged 14, 15, and 16 attending “evening and similar

schools and classes," and art schools and classes at any time during the session averaged not quite 100,000 in each year, so that even had their attendance been satisfactory, only about one-sixth of the children who had been in elementary schools (making no allowance for students from other sources) were continuing their education in any State-aided classes. Even for voluntary attendance this is seriously inadequate. There is, however, we must not forget, a good side even to this revelation. Those students were there who wanted to be there. They were there because of a zeal for knowledge, or because of ambition, or from a sense of duty, and because they were amenable to control or to good advice. A large proportion of them were keen students, and were a stimulus to one another and not a dead weight. The relatively small numbers again create classes of a manageable size. At present, it is a rare thing in my experience for an evening class for any length of time to number more than 35 pupils at the most, and more often the numbers fall far below these figures, while classes of between 50 and 60 still prevail in our elementary schools. If continuation schools are ever rendered compulsory, it is to be hoped that due provision will be made to retain for them this advantage, for on it in great measure their distinctive character must depend. On the other hand, they still too frequently fall below any useful limit and the general practice is to discontinue those where the average attendance does not number half-a-dozen.

In many county boroughs, and in the urban areas of certain counties, a system has been at work for some years of sending notices and exhortations to parents just as the child leaves school, and of providing record cards which can be used for employers, and now in connection with the Labour Exchanges. But in spite of this device for securing attendance, and of these inducements, it is still the custom for many children, who ultimately continue their education, to leave school altogether for several years, and thus allow a serious gap to take place in their training. For this, no doubt, there are various reasons. To turn from the comparatively sheltered life of the ordinary school child to the task of earning one's livelihood leaves often little strength or heart for serious instruction at the end of a long day, and even if the children have already been accustomed to work at home, or sell in the streets, before or after school time, they are even less likely on leaving school to avail themselves of

further classes. If they belong to homes where no book is ever read or anything but the betting news in the evening paper, they have little encouragement or opportunity to read or learn. If they are robust and high-spirited, well, robust and high-spirited youth is more likely to take the key of the fields or at any rate the key of the street, rather than pass in at the door of the continuation school.

And further it must be admitted that the imperfections of many of our elementary schools in England, the only schools which these people know as children, are in some degree to blame. The large classes there lead not unnaturally to a great deal of lecturing on the part of the teachers and allow of little individual attention. In schools where the classes are smaller, it is necessary, on financial grounds, to group several standards of children together, and the child who at 14 is still being taught with children two standards below it, has rather a dreary time. The subjects taught, though valuable from the point of view of knowledge and morals, do not as a rule appeal to the members of an average family as presenting any special interest or attraction. Can we wonder that children with the sixtieth share in the prosing of a mechanical teacher often look back on their school days with a shudder at their boredom? Who of us would like to hear a lecture or sermon for five days a week for 40 weeks in the year or more for nine years on end. And yet that is what being taught in too large classes by unskilful teachers, far too often must mean. Where, even under bad conditions, you get the born teacher, the enthusiast with capacity, it is another story; but how often do we get him in our schools, and how often having him there, can we set him (or her) free solely to teach?

As one means of facilitating attendance at continuation schools, or at any rate rendering it more easy to enter them, it has been proposed that children should be released from the elementary schools only on certain fixed dates in the year instead of each child rushing out by itself on its thirteenth or fourteenth birthday. It certainly would be simpler, at any rate in large districts, to organise suitable classes for each block of children passing out at one time, and, it would be easier even for the zealous children to enter their first continuation class at the beginning of the course, without either having to wait for the commencement of a session or else having to take up a new subject half-way through without any

intelligible introduction. It is true that this plan would render it less easy for the individual child to take up its first employment, but nevertheless it merits careful consideration.

Another suggestion is that the habit of coming to the evening school should be formed before the day school is left, and this plan I found most successful with elementary art classes, until the auditor interposed. The Board of Education very rightly holds as a general principle that one school at a time is enough for a child, and refuses evening school grants for children who are still attending the day school. It is, however, a question whether some relaxation might not be made a few months before the children leave, in order that while still accustomed to school discipline, they might get into the way of coming regularly to evening classes.

At all events, until this break between the elementary and continuation schools is overcome we shall have to reckon with those young men and women who, at 18 or 19, feeling the stimulus of ambition or the desire to increase their earnings, return to school and have the strength of character to begin again at a Fifth or even lower Standard, and to recall their imperfectly learned arithmetic or to train their unskilled hands to the practice of recording the notes, which their inexperience finds so difficult to summarise. All honour to their resolution and their patience, their path should be made easy, and special classes where possible should be formed for them.

But from their difficulties we realise the more keenly that no such break should occur.

B.—Where the school should be held, is a question that mostly solves itself. For younger pupils the elementary school buildings are obviously the right place and where a Technical School exists, transference to its classes should be regarded as a promotion to be earned only by regular attendance for two sessions or by special qualification. The chief difficulty is that too many of our elementary school premises still lack means of teaching practical subjects such as woodwork or cookery. Special provision, perhaps in the institutes themselves, might (where the numbers admit) be offered as a temporary expedient to those older pupils who wish to recover their half-lost education in order to profit by more advanced training, and yet are reluctant to sit at the same desk with children little more than half their age.

C.—What is to be taught? The answer I think should be; we must teach the pupils what they want to learn, what they are really interested in learning, and we must utilise the fact that their presence shows that they do want to learn something, to induce them to take it in a really educational manner. A boy comes to learn shorthand, we should insist on joining to it such English classes as will render his shorthand writing intelligent and capable. Arithmetic, again, is a subject which, even as practical arithmetic, it is exceedingly difficult to get boys to take, unless it is included in a course, and yet there are few subjects of so much use to them, at any rate in an industrial neighbourhood.

The Board of Education is wisely pressing for grouped courses, and in the North Midlands we have found great assistance from the excellent syllabuses prescribed by the Midland Counties Union of Educational Institutions, and in Lancashire and Cheshire the same function is performed by the parent Union of Institutes from which our society originated. Examinations are held and diplomas granted in groups of subjects, and these groups our county requires should be taken in the evening classes which it supports or subsidises. Of course, all examinations and cast-iron syllabuses have their drawbacks, and a decent amount of latitude must be allowed to older students and for certain courses, such perhaps, as domestic subjects. But the principle is one that deserves great consideration. The adoption of these courses, it is fair to say, generally produces a falling off in numbers for the first session, but this has in all cases, I think, been made good, while the quality of the work done has very distinctly improved.

It is desirable to introduce the pupil to a new subject if possible, and at any rate to try to teach the old subjects in a slightly different way. Nothing can be more disheartening than to find children who have left the elementary school in the VI. or VII. Standards being taken through V. Standard English in exactly the old fashion by an elementary teacher, and yet I have known this done. Another great opportunity of making a new departure in the continuation classes lies, as I have pointed out, in the reduced size of the classes, which render it possible to teach an old subject in what at the present time, at all events, must often be to the pupil a new manner.

But, as to subjects, I think that we have not yet had enough clear thinking as to the purposes of this continued

education. We do not yet generally see that we have to minister to the needs of two classes, between whom it is quite true that no sharp line can be drawn. Universally of course, we want to make all students educated members of the State, fit to form a judgment on public affairs, and to conduct their lives wisely and well. But after that our special aim is to help them in their daily employments, to make them more accurate, more far-seeing, more full of resource, more capable of applying scientific principles and knowledge to their work. But what of the mechanical tenders of machines, of those whose lifelong task it is to perform some one operation for which no machine except a human being has yet been invented? What about the hewers of wood and drawers of water, whose sole occupation is to transfer large quantities of heavy matter from one spot to another? Is it any use our teaching them? The answer formerly was that it was no use, and that it was needless expense to teach such people even to read and write. The citizenship argument of course disposes of that, but it is to my mind clear that though we can do little or nothing to affect the working hours of these men and women, we ought to develop their faculties for the intelligent employment of that leisure which, though scanty, is in most cases far longer than it used to be. To garden, to keep birds or animals, to study some branch of natural history, or take up carpentry or carving, or any other subject to which they can turn for relaxation and refreshment; these among other things would make their lives brighter and more full of interest. I say nothing of higher studies in art or literature or science. If they reach these, our task is over, except for finding means to give them what they want to know. It is the simpler and less robust folk whom I have in mind. If we cannot help their work, it must be our aim to give each of them a hobby.

In any case my own experience of the last two or three years shows that there is now a much greater readiness to learn to *do* things rather than to say or write them. Any practical classes, combined though they be with drawing or mathematics, are more welcome and better sustained than the mere prolongation of book work.

D.—When should they be held? Experience shows that our chance lies principally in the evenings between September and April for about a couple of hours on two or three evenings a week. The day continuation class is

no doubt of greater value, but is more difficult to secure. At present it is limited to certain classes of lads and men working on night shifts—so to speak a mere accident of employment—or to those admirable day classes for apprentices or young men in large works whose employers give them special facilities. But here we travel beyond the scope of the continuation class proper.

E.—Who are to be the teachers? In the earlier stages of the continuation schools, at any rate, we must rely on the teachers of the elementary schools, blended with and supplemented by occasional secondary teachers and qualified teachers of special subjects. A Technical Institute will to some extent have a whole-time staff of its own, and is now generally able to reinforce it to some extent by the university graduates or other highly qualified individuals engaged in industrial or scientific works in large towns. But it must be borne in mind that the day school teacher, who can teach all day and all the evening too, though it be only for two or three evenings a week for part of the year, is a man or woman of remarkable energy and freshness, if he or she can do both tasks well. Teaching, live teaching, teaching with any touch of inspiration about it, the only teaching that matters, is a very exhausting process, and it is doubtful if more than 10 per cent. of any large number of teachers can carry out effectively the double duties I have described.

Education Committees in towns frequently refuse to give the headmastership of evening schools to anyone who is already headmaster of a day school, as involving too great a strain, and prefer to appoint a senior assistant who then acquires experience valuable to him, when his promotion to a headmastership of a day school arrives.

These strong and strenuous natures who can continue to teach both by day and night are limited in number, and it is the lack of an adequate supply of teachers that is the first great obstacle to any general system of compulsory continuation schools. This is a very important point, since the temptation would at once arise to double the size of each evening class and revert to the large and inactive masses of the compulsory day schools.

So far I have tried to speak exclusively of the urban populations. But at the outset I drew attention to the essential difference between the conditions of town and country as affecting continuation schools. If we take again our five heads of pupils, buildings, subjects, time

and teachers, under nearly all of them some special difficulty arises in the country. I am conscious that our spaces and our solitudes are mere garden cities compared with many of the remote and sparsely populated regions in other portions of the Empire, but even our smaller distances are quite long enough to make our rural work a problem wholly separate. Where schools are five miles apart, the lads and girls between fourteen and seventeen may number perhaps no more than a dozen in each of many areas, even if some of their number have not already migrated to the towns. There is frequently only one resident certificated teacher, and that a mistress, in the day school, and in my own experience, country parishes are very reluctant to start a continuation school under a mistress. In fact, in Staffordshire at the present moment in the districts served by some 250 rural day schools we have only one continuation school under a headmistress. There are plenty of schools under a headmaster, and many classes taught by peripatetic teachers, but for the establishment of an evening school under a headmistress we received only one application, and where the locality does not invite it, there is little use in attempting to establish such a class. Even where there is a headmaster very frequently there is no evening school. I desire to speak in the very highest terms of the good country masters, who living in comparative solitude, receiving little sympathy and low pay, are doing excellent service in their generation. But there is no doubt that the smaller salaries, proportionate to the size of the schools, the isolated lives, the lack of opportunities, for their children more than themselves, make the best men reluctant to take service out of the towns. Consequently we cannot be surprised that a certain residuum of country posts are filled by men distinguished neither by versatility nor energy. Even when a competent teacher, a convenient schoolhouse, and a modicum of pupils are secured, it is not always easy to select subjects which will recommend themselves to a whole class. For it is one of the bewildering incidents of administering our country schools to find what diversity of occupation exists in each parish. In all our districts I do not know a single village in which the whole of the inhabitants would be satisfied with a purely agricultural education for their children. For the further education of the villages, then, in addition to such continuation classes proper as it is practicable to establish, we have to rely on peripatetic teachers, who take such subjects as

agriculture, gardening, poultry-keeping, wood-carving and woodwork, hygiene, nursing, dressmaking and cookery. These do not of course supply properly the place of the continuation classes, which really should lead on to them and they are further subject to the disadvantages of expense and of that lack of a close knowledge of the pupils which is inevitable with a transitory teacher. Anything like a complete organised course is also extremely difficult and usually impossible. Besides peripatetic teachers we can occasionally command a local practical man or woman with moderate qualifications in subjects such as carpentry, gardening, or cookery.

With these means a good deal of success has been obtained in a very few country areas, limited in extent and easily travelled. For among the advantages of such districts is to be noted the fact that it is easy to bring teachers together on Saturdays or for short periods for instruction in desirable subjects. But the expenditure required to make any such system of rural continuation schools universal throughout the country would be out of all proportion to the results, even if an adequate supply of suitable teachers could at present be obtained.

During the last twelve months out of a little over 200 rural parishes in Staffordshire we have provided further systematised instruction of some sort or other in not quite a hundred by means of local and peripatetic teachers, but some of these classes, such as cookery, were not suitable for boys, and still more were not intended for girls. These do not include single lectures or any courses under six hours.

Besides separate classes in each parish, the conveyance of pupils to some central school has been suggested, but for one thing any expenditure on this head is curiously and bitterly unpopular; for another any mixed excursions of boys and girls appears undesirable. A scheme again has been recommended of trying rural continuation schools for one day or two afternoons a week, possibly with a peripatetic staff moving round to five or six places a week; some such experiment might throw light on what is possible, but in many villages the only building available would be the elementary school already in use. Half time in the elementary schools now stands condemned on all hands, and in rural districts it is universally recognised as a most corrupting process to bring back the big lads who have been engaged with the men in field labour and to mix them with the younger children.

Supplementary courses to keep the older children longer at school, as in Scotland, have also been urged, but the nearest analogies to them under the Board's present regulations have been little, if at all, tried.

But I am travelling away from continuation schools, to which I must return, if only to bid the subject farewell.

There is one final word to be said, and a most important word, upon what continuation schools ought to give, and what at the present time they give in scanty measure. I mean their moral influence. I have been speaking throughout as a calculating administrator, reckoning in terms of demand and supply; so much instruction ordered, so many facts retailed. The enormous value of the secondary schools of England has been, not their teaching of classics or science or any special branch of knowledge, but their lessons in corporate life and manners, in their give-and-take and justice and fair play. But what of those whose industrial occupations prevent their protracting their daily education so as to take advantage of the numerous free places and scholarships and exhibitions and bursaries available in these schools? Do we administrators owe them no corresponding training, no education of character or of spirit in the classes to which they can resort? If you ask me how such training, such corporate life is in any degree practicable, I am prepared with no answer. I can only say that until some attempt at provision is made, our system is imperfect. Something can be done at any rate at Institutes with students' associations and clubs; something with boys' clubs and companies of scouts. The most potent factor is and always will be the strong personal ascendancy of a teacher or principal. The crown of all education is the priceless contact with an inspiring personality alike in the moral and in the intellectual world. The great difficulty of these classes is to secure any permanence or stability of relation, and in this respect the country village for once has an advantage. Indeed there are probably few positions in life which give a man such opportunities for influencing successive generations for good as that of a village schoolmaster. It is not that in the towns and cities there are not teachers as good and able, very often even more unselfish and more intellectual, but there is more to interfere with and to obscure their influence. I only desire here to sound the warning note that continuation schools should not be mere intellectual general providers, places where "instruction is ladled into troughs"; we

should try to make them schools as well, with all the meanings and associations that ought for every one of us to make school a sacred word.

SUMMARY OF THE DISCUSSION.

Dr. ROBERTSON (Chairman of the Canadian Royal Commission on Industrial Training and Technical Education) opened the discussion. He said that the men from overseas were very happy in this Conference; they found it very fertile in ideas and in friendship, which were perhaps the best things in life as well as in schools and in education. His Commission was greatly indebted to Mr. Runciman and his officials for helping to open wide many doors to them, and the same thanks were due to Sir John Struthers and the Scotch Education Department. He found it very refreshing to go among people who were not wholly satisfied with themselves and who were not continually lauding their own attainments. He was shortly going to Scotland, where he would, no doubt, find more of the same thing in a more intense form. He thought it had become a habit of speech for the English to depreciate everything they possessed, owing to the gravity with which they were in the habit of expressing their personal grievances against the weather. For his part he found it the most delightful climate in the world, not excepting Canada, but he thought that we transferred what he called the weather habit to our views of our educational system. He found things in England the best in all the world—except Scotland. The younger nation of Canada did not look upon England as behind-hand; they regard England as the headquarters of the great ideas and ideals which are pushing the Empire further into the activities of the whole human race.

They had given up in Canada the attitude which they once adopted; no longer are the words heard "No Englishman need apply." Twelve years ago he had been concerned with the introduction of manual training. He had gone to the United States and had found there the most excellent equipment. He had introduced into Canada the equipment of the United States, but he had come to England for his teachers.

The last sentence of Mr. Balfour's paper seemed to him to sum up the impression that he had gathered of English education; there had hitherto been frequently an idea that between the cultural and the practical in

education there was a great gulf, so that none might pass. Mr. Balfour saw no gulf because there was no gulf. Dr. Robertson emphasised the importance of training both the brain and hand. The influence of the workshop alone leaves the working classes lacking in aspiration and therefore an easy prey to drink and other degradations. He pointed out that a great deal was to be learned from living on the land and that the race did not get the best out of itself by living in towns, for in towns people lost the capacity for enjoying simple things. The "avenues of intake" are choked and it is because of this that the city man needs excitement.

A condition of good education is that there should be health, happiness, and goodwill, and a curriculum that does not promote these three things should be left outside the school door. In Canada we are hoping that there will arise a form of civilisation that will do as much credit to the Motherland as the first-born of any family since Adam. That is the spirit of Canada, and their schools must carry out the ideal, otherwise the people would be weak in body, feeble in mind, and selfish in spirit.

Sir HENRY F. HIBBERT (Education Committee, Lancashire County Council) said that he had long deplored the waste of money and neglect of opportunity which are due to the gap between the elementary day school and the continuation school. His Committee recognised the importance of Mr. Balfour's suggestion that the habit of going to the evening school should be formed before the day school was left. Although they had to forego grants because the Board of Education would not give a grant to children attending an elementary school and the continuation school, his Committee have been quite willing to put the idea into practice for some years. He had for many years preached a crusade on the question of continuation schools, and he thought the result was shown by the high percentage of attendances at evening classes which prevailed in Lancashire. Years ago he had been in favour of compulsory attendance at continuation classes, but he had now to some extent changed his opinion. There are probably a certain percentage of boys and girls whose education it would be an enormous waste of money to continue. He felt that a proportional return for the money spent on education would never be obtained until the sympathies of the parents were enlisted. He thought that the reason why

so many of the important positions in life were filled by Scotchmen was that the Scottish father and mother think more of the education of their children than do the English.

Mr. ALEXANDER SIEMENS (Messrs. Siemens Brothers and Co., Ltd., Electrical and Telegraph Engineers and Contractors, Caxton House, Tothill Street, Westminster, S.W.) spoke from the standpoint of the employer. He alluded to the letter quoted by Mr. Blair in section II. of his paper, and said that from his point of view the reason why instruction given in the trade schools was no good was exactly what Mr. Blair gives as a reason why it should be satisfactory, namely, that the instructors are graduates of the university who have only spent apprenticeship in workshops and do not know what is required. As Mr. Blair himself said, the employers' view was not the result of prejudice or ignorance on their part. But the employers know what they want and what is useful to them. The important point is really explained in the last sentence quoted from the letter. What employers want is a boy who is independent and alert. He had gathered the impression from the two papers that their scheme was too immense. Learning a trade can be done much better in the workshop than in school; a boy should be taught to be reliable, quick, and accurate, and that is what is needed before he enters the workshop.

Mr. C. E. BEVAN-BROWN (Boys' High School, Christchurch, New Zealand) thought the Conference would like to know that in New Zealand an Act had been passed recently making continuation schools compulsory, if the local authority wishes it, between the ages of 14 and 18. The only point he wished to refer to in Mr. Balfour's paper was the hope he had expressed that something might be done to introduce a corporate spirit among the pupils in continuation classes. The speaker thought the keenness which would be likely to characterise a small number of pupils who voluntarily presented themselves at the evening school would of itself create a moral refinement which is sometimes lacking in richer schools where there is not the same earnestness for work. He went on to say that in New Zealand a great deal had been done by the public school teachers to encourage a corporate spirit by organising annual sports for the boys and girls. He thought that a great deal was being done by the compulsory cadet training which now exists in New Zealand.

Dr. HENRY DYER (School Board of Glasgow) said that the development of education in Scotland had not been interfered with, as it had in England, by the celebrated Mr. Cockerton whom Mr. Balfour had mentioned. They could develop their elementary education as high as they thought it necessary, and they flattered themselves that in Glasgow their continuation schools were probably the best organised in the Kingdom.

The continuation class code of the Scotch Education Department enables them to organise classes of three or four different standards. In the first division they have classes of the ordinary technical kind for those who have completed the day school course. In the other three divisions are classes of a more advanced character. They are now developing classes somewhat on the lines mentioned by Mr. Blair for artisan students who are never likely to proceed to the higher institutions. The artisan student is distinct from the student who becomes a draughtsman or a foreman or a manager, and does not require higher education. He does not require very much more than a knowledge of arithmetic in its technical application to his trade and the capacity to draw and understand a drawing. It is more important to cultivate the general intelligence of these men than to burden them with knowledge which they will never be able to apply. The tendency of modern trade and industry is such as to make it less necessary for these men to have scientific knowledge. Managers prepare the work and they merely want men who will carry it out in an intelligent manner. The Glasgow School Board has passed byelaws involving a certain amount of compulsion in continuation schools, but has not adopted the Act in its fullest sense. Dr. Dyer was not anxious that they should hurry too quickly to compulsion, which he thought would disclose defects in the methods of administration and organisation. He commended a circular issued by the Scotch Education Department on the subject of continuation classes, and emphasised the importance of all the three subjects of instruction therein mentioned, namely, instruction relating to health, general culture, and trade training. He thought it unfortunate that the greater part of the instruction now given is confined almost entirely to the purely practical subjects.

Mr. GEORGE MANNERS (Chairman of the District Messenger Company) attached importance to the statement quoted in Mr. Blair's paper that manufacturers preferred an education which made boys alert and independent.

He said that he spent most of his time answering the questions of his friends and enemies as to the future of district messengers. It is commonly supposed to be a sort of blind-alley employment and is called the road to ruin. Their experience is really quite the reverse. Their boys are so sharpened up that they get very good places when going into the world. He thought that the boy scout movement was doing a great deal to develop alertness and independence.

Mr. R. APPEGARTH (National Industrial Education League) thought that Mr. Balfour must have been in a despondent state of mind when he wrote the concluding words of his paper, where he asked in connection with the industries in which many of our workers are engaged, what could be done to enable them to enjoy life and to make life worth living. He was sorry that Mr. Balfour had no answer to give to this question and wished to give him a word or two of encouragement. You must teach workers what they are capable of being taught, and the best judges of that are the employers of labour and the leaders of the workers themselves. In the previous meetings of the Conference they had heard a great deal about universities, professors, and students, but they had now got to the bed-rock of the subject. He hoped shortly to see the country studded with schools giving practical training of the kind given at the Ferndale Road School, Brixton, where boys are taught every branch of the building trade by the best and most practical teachers.

Parliament will have to recognise that the children are the nation's greatest asset, and that it is not a question of continuation schools and of training and teaching the children after they have left school, but of catching the children while they are young and keeping them until they become intelligent boys and girls. The expense of this must naturally come out of the national Exchequer and employers will then have less occasion to talk about what they are doing for the cause of education.

Mr. BALLIN (The Mansion House Apprenticeship Committee) submitted that the subject of apprenticeship had been almost omitted and had been referred to in rather contemptuous terms in Mr. Blair's paper. The experience of masters or artisans and those who have studied the matter is that the training given in trade schools is not a substitute for apprenticeship. He did not wish the delegates from overseas to go away with

the idea that apprenticeship was not being carried out in this country. He noticed that Mr. Blair calculated that the cost per head of teaching boys in trade schools was from £12 to £20 a year, and submitted that if a much smaller sum were paid to masters in the various trades there would be ample places found for suitable boys and girls with far better results.

Complaints have been made of the number of children who leave school and do not go into any continuation school, but this is accounted for by the financial position of the parents, who cannot afford to keep their children from earning their living. He found in his experience that the great bulk of people who were anxious to get their children apprenticed were unable, more than unwilling, to make the financial sacrifice which was entailed. He thought it was a pity that the system of apprenticeship had been condemned as absurd and impracticable by the London County Council, and stated that nevertheless apprenticeship was still going on. He said that of the apprentices whom he had had through the National Institute of Apprenticeship, 95 per cent. passed through their apprenticeship, and 62 per cent. remained on satisfactory wages afterwards, 33 per cent. were carrying on their trade at other shops and getting satisfactory wages, making 95 per cent of successes.

Mr. BLAIR had only one point to reply to--the criticism made by Mr. Siemens and repeated later. He had expected this criticism and knew that it would come. He said that there was unfortunately an antagonism between industry and the schools. Speaking generally the capitalist wants children to work, and thinks of his dividends. It is not the business of the schools to produce dividend-earners. The schools and those connected with them have higher ideals than that, and it must not be forgotten that the children have a life to live.

Mr. GRAHAM BALFOUR agreed with the criticism that training should make boys reliable. From his own experience he found it difficult to get boys of that kind. He would rather have them reliable than smart. He was really much more sanguine than he appeared to Mr. Applegarth. The remarks he had made about providing a hobby were intended for the people whose lives are extremely monotonous, and who are engaged in wearisome mechanical operations. He was not sanguine enough to believe that we could get rid in this world of

the monotonous work and would like those people to get as good a time as possible while they were engaged in it.

RECEPTION OF A DEPUTATION FROM THE JOINT COMMITTEE ON GRAMMATICAL TERMINOLOGY.*

The CHAIRMAN: Gentlemen, a Deputation is before you from the Committee on Grammatical Terminology consisting of Professor Sonnenschein, of Birmingham, Miss Haig Brown, of Oxford, and Professor Rippmann, of London, and I wish to assure them on your behalf that the Conference will consider with great interest the short statement I believe they are prepared to place before you. They already understand, I think, that the pressure of business before the Conference makes it impossible to discuss the matter or to follow that statement with any consideration of the interesting points which no doubt Professor Sonnenschein desires to bring before you. With these few words and an explanation that the report of the Joint Committee on Grammatical Terminology,[†] is on the table, I will ask Professor Sonnenschein to address the Conference.

Professor SONNENSCHN: Dr. Heath and Gentlemen, it is perhaps not unfitting that the Imperial Education Conference, which has to deal with co-ordinating the educational systems of the Empire, should devote

* The following extract from the Introduction to the Report of the Joint Committee on Grammatical Terminology explains the origin and aim of the Committee:—

“A proposal for the simplification and unification of the terminologies and classifications employed in the grammars of different languages was mooted at the Birmingham meeting of the Classical Association on October 10, 1908; and in December of the same year the Council took steps to invite other Associations to join in the movement. Early in 1909 a Joint Committee was constituted, consisting of representatives elected by eight Associations—The Classical Association, The Modern Language Association, The English Association, The Incorporated Association of Headmasters, The Association of Headmistresses, The Incorporated Association of Assistant Masters in Secondary Schools, The Incorporated Association of Assistant Mistresses in Public Secondary Schools, The Association of Preparatory Schools. To the twenty-one members of the Committee thus appointed two members were added by co-optation.”

† This report will shortly be published by John Murray, Albemarle Street, London, W.

attention for a few moments to a scheme which aims at introducing unity into the teaching of grammar.

In setting forth briefly the aims and the objects of the Joint Committee on Grammatical Terminology I will attempt to answer questions which will naturally arise in your minds.

The confusion of terminology which it is the object of the Joint Committee to remove has arisen from two causes: firstly, diversity of treatment by different grammarians of each language taken separately, especially English; secondly, failure to co-ordinate and treat from a common point of view the grammatical phenomena of the different languages taught in schools. Thus we have arrived at a position in which we have, on the one hand, the same thing described by different terms; for example, *I wrote* is called in English a "Past Indefinite"; but in French *j'écrivis* is called "Passé Défini," a term which, by the bye, has recently been given up by the French Ministry; in Greek *ἔγραψα* is called "Aorist," in Latin *scripsi* is called "Perfect," and in German *ich schrieb* is called, strange to say, "Imperfect." Here we have five different names for five tenses which are to a great extent, though not altogether, coincident in meaning.

On the other hand, we have different things described by the same term. For example, the term "Attribute," which is applied to a certain part of the sentence in English, Latin, Greek, and German, is applied to an entirely different part of the sentence in French, viz., to what is sometimes called the "Complement" in English and what we of the Joint Committee call the "Predicative" Adjective or Noun or Pronoun. I might elaborate these points at great length if time permitted, but perhaps it may suffice to say that when I contemplate the marvellous exhibition of the onomatopoeic powers of the human mind displayed in the terminology of grammar I am reminded of the story of a lady who once visited an astronomical observatory, and, after having had the use of the instruments explained to her, declared herself to be quite able to understand how, by the aid of a powerful telescope, a new star might be discovered; but what she could not make out was how the astronomers discovered their names!

The confusion to which I have referred is not confined to this country, but is found in all countries, though no doubt to a less degree in some than in others. America is, perhaps, suffering from the evil more than any Euro-

pean country, partly owing to the very independence and enterprise of American grammarians. That a reform is felt to be needed in France is shown by the appointment of a Commission of Enquiry a few years ago; their report, dealing only with French, was issued and approved by the Ministry of Instruction last year. In Germany a similar movement was initiated at the Neuphilologentag last year (May 1910), and will come up for consideration again in 1912. How far an international agreement as to the use of terms is possible or desirable I do not know. It is possible, as our Joint Committee suggests, that in each country the mother tongue should form the basis of the scheme of grammar teaching, and that therefore the schemes of different countries would be different. But one thing is clear, that a common scheme might be adopted by all English speaking countries, whether in the Northern Hemisphere or under the Southern Cross.

As matters stand at present, it is not too much to say that the teaching of grammar has got into a muddle. How is the evil to be remedied? In the old days, we are told, the terminology of Latin grammar was applied as it stood to the other languages taught in schools, and so there arose a kind of uniformity in dealing with all these languages; but we do not propose to go back to that method. To impose a terminology which had been devised to suit one language upon all the other languages of the group was to do a violence to those other languages. Our object is rather to find a common point of view from which the grammatical phenomena of all the languages of our family can be regarded and named; in other words, to adopt a common scheme of classification and nomenclature, based on distinctions of meaning, which may be applied without violence to all the languages of the group. The adoption of this principle ought to lead to a gain in terminology for each language taken separately, in so far as its grammatical features are thus dealt with from a wider and more adequate point of view.

On the other hand, it might seem as though this principle would involve an entirely new system of terms; in other words, a complete break with the past. That depends on how the principle is interpreted. It has been the object of this Committee to be as conservative as possible in the maintenance of existing terminology; and, as a matter of fact, the terms recommended in our report are in the large majority of cases old-established terms which are generally understood. Our terms may be

classified under two headings: first, terms which are non-significant, *i.e.*, mere labels, such as the names of the cases—Nominative, Accusative, Genitive, Dative, Ablative (*see* Report, pp. 25–27). Here it is not desirable to attempt to find significant terms, *i.e.*, terms which will describe the multifarious uses of the cases, for the simple reason that it is impossible to do so. The term “quale-quare-quidditive,” invented by the father of the poet Coleridge for the Ablative, is an awful warning against any such attempt. Second, significant terms, *i.e.*, terms which describe the most prominent, if not all, the meanings of the form to which they are applied. As instances I may mention the names of the tenses (*see* Report, pp. 28–32).

This scheme claims to indicate not only the likenesses but also the differences of the languages with which we are concerned—the five school languages. Take the tenses, for example. Let us suppose that the pupil has mastered the names of the six chief tenses of English (page 28), and that he proceeds to learn French (page 30). The new facts that he has to master are essentially two: (i) that to the English “Past” there correspond two tenses in French, the “Past Continuous or Imperfect” and the “Past Historic”—two Pasts, expressing meanings which are expressed by one form in English and German; (ii) that the French tense which corresponds in form to the English “Present Perfect” is wider in use, and hence is called not “Present Perfect” but simply “Perfect.” The omission of the word “Present” from the name just indicates the difference; the word “Perfect” marks the element that is common to *j'écris* and *I have written*. Now suppose the pupil to attack Latin (page 31). All that he has to learn is that in Latin there is no separate form for the “Past Historic” (*j'écrivis*), this meaning being expressed by the “Perfect” (*scripsi*), which has the same double use as the French “Perfect.” When he comes to Greek he finds that he is back again in the French scheme, with a separate form for the “Past Historic,” viz., the “Aorist” (*ἔγραψα*).

To conclude, in these days of overburdened curricula it becomes increasingly important to save time and energy by making the scheme of grammar teaching simple and coherent, in other words, by treating all the school languages as what, in fact, they are—so many dialects of a common European language.

The CHAIRMAN: Is it intended that any other member of your delegation should address us?

Professor SONNENSCHN: We should very much value the opportunity of a few words from Professor Rippmann as representing modern language teachers.

The CHAIRMAN: If Professor Rippmann could address the Conference, say, for five minutes—I am sorry to cut him down, we have so much to do—we should be pleased.

Professor RIPPMA: I should like to say a few words in regard to this problem from the point of view of the modern language teacher. There has been a very remarkable change in the methods of teaching modern languages, and this reform movement has made astounding progress in England in the last 12 years. In the United States, which I have just visited, I have found that the linguistic teaching is at least 10 years behind ours. As a feature of this reform I will mention specially the growing use of the foreign language and the restricting as far as possible of the use of the mother tongue in modern language teaching. That is true generally; it also applies in a marked degree to the teaching of grammar. This is now to a large extent carried on in the foreign language and on that account the terminology has to be that of the foreign language. Now if a foreign language is learned at all it is obviously important that the learner should acquire his elementary conceptions of grammar in the mother tongue. That has not been the case to a sufficient degree with us. In our secondary schools (and these are the only ones we have to consider here, as being the only ones in which foreign languages are taught), the teaching of English grammar has in most cases been so unsatisfactory that the foreign language teacher has been put to a great deal of trouble unnecessarily. The path should have been cleared for him by the teacher of English. These elementary conceptions of grammar in the mother tongue necessitate a limited number of grammatical terms; and when the first foreign language is learned, which in England is, generally speaking, French, it is obviously of the greatest importance that the terminology employed in that foreign language should be, as far as possible, in agreement with that with which the children have been made familiar in the mother tongue, otherwise there is bound to be confusion.

The same thing holds good naturally with other foreign languages, and I should like to add here some remarks with regard to the teaching of the pronunciation, which as a matter of fact has not been dealt with in the

report on grammatical terminology; but we do feel that it is a very important thing, and, had time allowed, the Committee would have dealt also with the terminology of phonetics. We now realise in England that the pronunciation can only be taught satisfactorily if phonetics are utilised. The teacher must have a sound knowledge of the subject, of which he must be able to make suitable application in his teaching. In looking back on the work we have done in this country, we feel that it is of the utmost importance that here there should be uniformity in phonetics. If we consider the different languages that have a place in the secondary school curriculum, we are convinced that there should be elementary instruction in the speech sounds of the mother tongue before any foreign language is started; that is just as important as the teaching of the elementary conceptions of grammar to which I have referred. When the child comes to learn French, Latin, German, or Greek, there the pronunciation should be taught on similar lines; and this necessitates perhaps not so much the same terminology in a general sense as the use of the same phonetic symbols. That great progress has been made in England in the teaching of pronunciation by means of phonetics has been largely due to the almost universal acceptance of one alphabet for all these languages, that of the International Phonetic Association. In other countries progress has been seriously hampered by individuals who have had their own ideas on the subject, and have tried to push forward their own alphabets; that has led to confusion and distrust.

I will conclude by urging uniformity in language teaching throughout the schools, in the matter of phonetics as well as generally in the teaching of grammar. Only if the language teachers in a school co-operate satisfactorily will the impressions on the child-mind of similar things be sufficient to produce true linguistic culture. I regret that there is not more time at my disposal, but might I at any rate venture to urge upon you, if you have the time, to pay some attention to the work which is being done in England in the practical application of phonetics to the teaching of languages.

The CHAIRMAN: Well, it gives me very great pleasure in the name of the Conference to thank you for having attended to-day and given us the clear statement of your aims.

The deputation then withdrew.

PAPERS ON THE SIMPLIFICATION OF ENGLISH
SPELLING.

I.—ENGLISH SPELLING AND SPELLING REFORM.

By Dr. E. R. Edwards, H.M.I.

Preliminary.

The subject suggested for discussion is “What should be the attitude of Education Departments to the more important movements in favour of the simplification, improvement, and uniformity of English spelling?”

You are all probably well aware that this matter has attracted a good deal of public attention, particularly during the past few years; changes in this direction have already been suggested, and the general idea of reform of this kind has been well received in certain quarters.

I should like to explain at once that my paper will not deal primarily with the merits or otherwise of the various proposals which have already been put forward for the simplification, improvement, or uniformity of English spelling. My contribution will aim rather at putting before you certain aspects of this problem in the light of modern linguistics; it will try to show in what way the results of modern living language study can help us.

There is a preliminary point which I want to make quite clear. I am an official of the Board of Education of this country, but to-day you must regard me rather as a person who happens to have given some time and thought to problems of modern linguistics generally. It is on this understanding that I venture to put forward these brief notes on a matter which covers a wide field and has complications and difficulties not often sufficiently recognised.

The plan of my paper is as follows:—

- (1) Some remarks on English spelling, particularly the defects of our spelling,
- (2) A section dealing with certain fundamental principles which should be borne in mind when considering the problem of reforming English spelling.

- (3) A consideration of the possible general answers to the question, "what should be the attitude towards simplification, improvement, and uniformity of English spelling," and some remarks on the advantages and objections connected with each main solution.

Quite frankly, I think the first few minutes of my paper will call for a certain amount of patience and resignation on your part, but I promise you that the concluding sections will deal with real practical things.

The first section deals mainly with commonplace or obvious statements, but it makes, I think, a necessary introduction to my following sections:—

I.—English Spelling—in particular, its Defects.

The wording of the subject for discussion this morning suggests a certain dissatisfaction with traditional English spelling. The case is indeed a very bad one. It would be hard to find a language anywhere in which the spelling is more irregular, and in which the written word is further removed from some easily learnt and easily recognisable phonetic value.

I do not need to elaborate this point. You are well aware that a child cannot get over the threshold of English spelling, cannot begin the English alphabet, without encountering enormous difficulties at once; he is introduced to the first letter; in the first easy reading book he may find that the first symbol stands for—

ā	in the word	"ask,"
æ	"	"ash,"
ei	"	"ale,"
ō	"	"all,"
ə	"	"away" or "sofa,"
ε	"	"care,"
o	"	"want."

Here are at least seven very different sounds represented by this very first symbol.

How then did we come to have such a clumsy, unscientific script for our English spelling?

Perhaps the chief reason for the enormous differences between sounds and spellings of English is to be found in the imperfections of the Roman alphabet.

Several of the elementary consonants necessary in English (both now and in its earlier stages) have no

separate letters, and must therefore be represented in clumsy ways, thus—

there is no simple symbol for the consonants common to

- (i) (she) and (fish),
- (ii) (measure) and (occasion),
- (iii) (think) and (sing).

There are no signs to represent quantity, stress, or intonation, and of these stress is particularly important for English.

The vowel system borrowed from Latin is particularly defective, there are only five or six vowel symbols, while a good many speakers of English use 12 or 13 or more different vowels in their speech. To represent my own speech with reasonable accuracy in writing, some 13 or 14 vowel symbols are necessary, viz., those contained in the words—

feet (ī),	
sit (ì),	
say (ei),	
met (è)	} these two might perhaps be written alike
mare (ε)	
man (æ),	
my (ai),	
arm (ā),	
all (ā),	
not (ô),	
no (ou),	
put (ù),	
boot (ū),	

the last vowel in soda (ə), and first vowel in early (ē), and to represent these 14 vowels, I have to make shift with the vowel symbols called a, e, i, o, u and y.

Then, on the other hand, this most defective Roman alphabet has also the contrary evils of redundancy—at least the letters called c, q, and x, with their existing values, could be omitted in a phonetic English spelling.

Much of our English spelling difficulty therefore is due to the original sin of the defective and redundant Latin alphabet.

Nor was this all, our unfortunate English spelling had in its early days other foreign complications. The Norman scribes brought in peculiarities of French spelling. Words borrowed from other countries were spelt in accordance with the usage of these languages; and later the influence

of the classical languages was strong, especially Latin, and some Greek words were brought in in Latin shape. Absurd spellings came from mistaken ideas of etymology. If some of the writers of English had been wise enough to make the most of their own wonderful language, and if they had been scholarly enough to keep their Latin in its right place, it would have been to the great advantage of the English language—we should perhaps have been saved spellings of the type of *s-c-e-n-t*, with a superfluous *c*, and *d-e-b-t* with a superfluous *b*, connected with the French words *sentir* and *dette* which have no *c* or *b*.

Then, in addition to these influences on English spelling, there has been, of course, the powerful influence of tradition. The first people followed more or less the dictates of their own ears, but those who followed them imitated the spelling of others, particularly the spellings of those who had written books before them. Traditional spelling has been a great force in English writing since the introduction of printing. Speaking very generally, our modern English spelling represents the pronunciation of about that time—say, 1480: if our modern English spelling can be said to stand for any real phonetic values, it stands mainly for the speech of some 400 years ago. It is hardly a matter for wonder then that English spelling is regarded by some people in the 20th century as being somewhat out of date.

I can hardly do better than to complete my first section with a quotation from Professor Skeat of Cambridge, the well-known English scholar.

“In the earlier part of the sixteenth century, a new idea came into English spelling which has wrought sad havoc and disaster, viz., the notion that a word ought not to be spelt according to its sound, but according to its etymology and derivation; and this specious but senseless notion was attended with the worst consequences. For one thing, the derivations assigned were frequently wrong: and then a spelling was adopted which was neither phonetic nor etymological, but bad both ways. And this is the system which has ever since gone from bad to worse, and has landed us in the present state of chaos.”

“The fact is that most people fail to grasp the one leading principle, viz., that it is the spoken word that really matters. Writing was invented for the purpose of representing the sound, and is only useful so far as it does so. The sole true judge is the ear. Yet we

actually judge by the eye; we actually go by the look of the thing, and consider whether the word looks like Latin or Greek. If it does that, we call it good, in defiance of truth and logic. Yet whilst we are commonly anxious to spell English in such a manner as to show off our Latin and Greek, we lose sight of the material fact that the bulk of the language is neither of Latin nor of Greek origin, but goes back, in countless cases, to Old Mercian or to Anglo-French, neither of which is at all familiar to the average schoolboy. The plea for 'etymological' spelling, falsely so called, is invariably given up by every true English scholar as soon as he really comes to know the actual facts, and can understand a page of Chaucer or a page of Alfred; but, as such scholars are in a very small minority and are likely long to remain so, there is an overwhelming consensus of opinion in favour of continuing to bear the yoke which the printers impose on us."

I hardly need to say that personally I entirely agree with this powerful language of Professor Skeat's.

II.—Consideration of certain Fundamental Principles.

Now what is it that has changed most in these 400 years? I want to make this point particularly clear, because the improvement of English spelling must have some sound scientific basis, there must be fundamental principles underlying any change, otherwise our "improvement" will be mere amateur tinkering.

Of course the actual vocabulary has altered a good deal since the early days of traditional English spelling, new words have come in, old words have dropped out; but the greatest change, and the one which is most important from the point of view of our present inquiry is the change of pronunciation. One of the most important statements in modern philology is the rule that *a living language is in a state of perpetual transformation, and further, that certain forces are at work altering the sounds of a language from generation to generation.*

Those of you who have kept pace with modern philology will know that this is recognised by all the great modern scholars of linguistics, and you will not wish me to stop and prove it, but I want to put you in a position to judge for yourselves what it is that has changed most.

And I think I shall arrive at that end in the shortest space of time if I try to give you an oral demonstration of historical change in pronunciation. I shall read you a few very well known lines, written some 300 years ago, in what we think was probably the pronunciation of that time:—

As You Like It.

Act V., Scene III.

it waz a luvèr and hiz las,
etc.,

etc.

I chose Shakespeare because he is regularly read in all our English schools, and because he is regarded as a modern English author.

I think what I read is sufficient to give at least an indication of quite important changes that have taken place in 300 years; and, as you are aware, the changes in the written form have in no way kept pace with the changes of sounds.

The next important point I want to make in my argument—and it is also one which will have an important bearing on my concluding section—is this:—

Just as there are historical sound-changes in a language from generation to generation and from century to century, so *there are at any one point in the history of a living language differences of sounds, dialects, and varieties of speech* which can be noticed and studied. From a strictly phonetic point of view, *every human being speaks his own individual language*, and nobody else in the world speaks quite the same language. But the differences between closely connected individuals are not always sufficiently marked to strike the ordinary observer, but the differences become important if we choose for comparison two speakers who are separated fairly widely by geographical or by social distances. Each person's speech falls into some group, and these groups, or dialects, make up the whole language.

This point about dialects of living English, and the question of possible standards of English speech, is of the utmost importance if we are going to set to work at our problem of the English spelling in a scientific way.

I shall come back to this point and deal with it a little more fully in a moment.

III.—The Possible Answers.

I now come to my third and last section.

We have some of the rough material now for considering the possible answers to our question: "What should be the attitude towards simplification, improvement, and uniformity of English spelling?"

There are at least three very different answers possible:

(1) Don't change anything at all; keep the traditional spelling.

(2) Go to the other extreme, start afresh, and change everything; have a new English spelling.

(3) Let us have a gradual reform of the traditional spelling, getting rid first of the more glaring inconsistencies.

These three answers, with their possible combinations, should of course cover the whole ground. I only want to put before you, as briefly as I can, some of the principal advantages and objections, theoretical and practical, connected with each main solution.

With regard to (1) the retention of the spelling just as it is: I imagine very few of us present would care to defend the traditional English spelling on the ground that it is already simple, that it cannot be improved, and that there is already uniformity of usage. The only argument I can imagine is the argument that has been used, and will be used, by the passing generation as opposed to the coming generation, concerning any great change, viz., that the passing generation have grown used to many imperfect things—to which they have become attached for sentimental, æsthetic, and other reasons—and they would put up with an evil or imperfect thing they have grown accustomed to rather than have the trouble and discomfort of altering it.

I would warn such people that they are living in a fool's paradise, if they imagine that mere inertness on their part will ensure the standing still of present English, or the particular English which they cherish. As I have already stated, English is a living language, and a living language is in a state of gradual change.

And further, these conservative-minded persons seem to be unaware that a curious pedantic English, not at all like their own English, is being taught to the younger generation by persons who have not sufficiently studied the history of language. Just because the present English

spelling bears no sort of exact relationship to any recognised living English speech, the language is being altered in various directions by teachers and others who have a totally inadequate knowledge of the growth and structure of past and present English. It is possible to defend almost any pronunciation or mispronunciation of English, however grotesque, by referring to English spelling.

Here are a few words I have heard recently in English schools—and I add carefully—in English elementary and secondary schools, and from pupils and teachers.

Spelling-pronunciation of the following words:—

(English).
 (England).
 (Monday).
 (nature).
 (breakfast).
 (tortoise).
 (conquer).
 (halfpenny).
 (halfpenny-worth).
 (minute).

(in spite of a respectable amount of some 200 or 300 years side by side with “lettuce” (= letis) and “biscuit” (= biskit).

To take the case of the words *English* and *England*: there is documentary evidence from the 16th century onwards that the pronunciation has never been, in modern English, anything else but *Inglish* and *Ingland*. These words were spelt with the letter called “e” in the days when

think was spelt thenk
 chimney was chemney
 string was streng
 wing was weng
 hinge was henge, and so on.

The next step with “halfpenny” will most probably be hælfpeni; this spelling pronunciation is already heard in rælf (Ralph), which was spelt Rafe = reif in the 15th century. The “f” in “halfpenny” had already gone in “Pierce the Plowman.” Then why not wa/k, ta/k,

kələnel (for colonel)
 mōrtgeidʒ (for mortgage)
 Kraistmaes (for Christmas)
 Worstestəshaɪə (for Worcestershire)?

These can equally well be defended on the ground of the traditional spelling. A further step, if this change is to be a logical one, will be the reincarnation of dead and gone English sounds to fit on to the old spellings, *e.g.* "gh," the old sounds x and ç.

enūx (for enough)

liçt (for light)

"t" in *often* was mute for at least two centuries: it has recently been brought in by some people because of the spelling. If *Worsestəshaia* sounds improbable compare the case of Cirencester, which was formerly pronounced Sisistə, or Sisitə, and recently *Sairənsəstə*.

My point is, that the English language and its spelling do not really remain as they are because we take no action. A living thing like a language is similar to a human being in this respect—it does not stop still; if it is not progressing or moving in one direction it is moving backwards or moving in another direction.

I now go on to the consideration of the second great alternative; (2) Scrap the whole spelling and let us start afresh.

This sounds very new and very revolutionary. But as a matter of fact, the idea of scrapping the English spelling has quite a respectable antiquity. In about 1570, or some three and a half centuries ago, a certain John Hart proposed a purely phonetic spelling of English. And to come to more recent times, books containing phonetic transcriptions of English are now being well used, and are growing in number since English Phonetics was put on a sound basis by those two greatest of modern English phoneticians—Alex. Ellis and Henry Sweet.

The use of phonetic transcriptions has increased enormously during the past seven years in our English secondary schools, but it is mostly confined to phonetic transcriptions of French. The first year's course in many of the efficient secondary schools in London and Middlesex, and other progressive (or more quickly moving) parts of England, is done entirely through the medium of a logical script—that of the International Phonetic Association. A beginning has been made, too, with phonetic transcriptions of English, but, so far, only for a particular and interesting reason. Those secondary schools which are in receipt of the full grant from the Board of Education offer generally 25 per cent. of their places free to children who have passed up through the

neighbouring elementary schools. It is found that such children are handicapped, sometimes seriously, in their after-careers by their home dialect, and one or two London secondary schools are successfully teaching these poor but clever children a kind of pronunciation which enables them to pass muster as speakers of a possible standard English. And the most useful way of carrying out this experiment is by the use of texts in phonetic script, accompanied by drill with phonetic sound-charts.

Now a logical phonetic script is delightfully simple—an intelligent adult foreigner could learn to read English quite passably in a couple of hours—and he could spell correctly every word of English he knew.

But there are difficulties in the way of this solution which belong also to the next solution, which I shall now deal with.

(3) The third and last solution:—The improvement and simplification of English spelling by a process of gradual change.

First of all, this answer will have to deal with the difficulty inherent in all compromises. Why should you stop at *x*, altering 300 words? Why not go to *y*, altering 500 words? Why not go still further to *z*, altering 1,000 or even 10,000 words?

But the most serious difficulty in my mind is one that does not seem to have been sufficiently realised by those reformers who have hitherto presented us with piecemeal reforms of English spelling.

We have to try to realise that any page of English written in the traditional spelling is a page of a dead language—it belongs to the past together with Latin or old Egyptian or primitive Aryan. That page of English only becomes living when it is uttered by someone; it is the living voice that make a living language of it.

The present state of affairs is that the English written language, *i.e.*, its spelling, represents no living person's speech. It may have represented something like somebody's pronunciation 400 years ago. Each separate group of living English-speaking persons who can read now makes that page of written English into living English of some kind.

Now, if it is proposed to alter the traditional spelling, the first thing surely to decide is how it should be changed and along what lines it should be changed. It is clearly necessary to know what we are aiming at. I think most of the reformers would explain that they

were aiming at making written English come somewhere within recognisable distance of spoken English. But my point here is—WHOSE spoken English? And I do not think there is any sort of general agreement yet about the answer to my question.

Is it to be :—

Southern English,
Northern English,
Scottish English,
Irish English,
American English,
Australian English,
Cockney English,
Somersetshire English,

or any other variety?

I will give you a short specimen of a disreputable variety, the cockney dialect.

The cockney I experimented on was an East-End—
—a smart little chap—who read me a verse out of his
school reading book—he gave me this. I will give you
the translation later :—

ɔi cām frm ōnts ə cūwθ n ēn,
ɔi maik sədæɪŋ selij,
n spōkul āt əmæŋ və fān,
tə bigə dān ə velij.

But you have not recognised the poem of Tennyson ; I
hasten to add my own rendering :—

I come from haunts of coot and hern,
I make a sudden sally,
And sparkle out among the fern,
To bicker down a valley.

To sum up this section, I should like to suggest, as a most desirable first step towards settling this question, viz., what are we aiming at in the proposed changes of spelling—in the direction of whose spoken English?—I should like to suggest an inquiry of a strictly impartial and scientific character. I think there is urgent need of an accurate return which would make clear what is spoken English not only in Britain but in Greatest Britain—in its full linguistic sense. The inquiry should include the more important groups of English-speaking people all the world over. We ought to have available a record of the characteristic pronunciation of each of these groups. There is nothing of the kind in existence

yet. When this has been done we shall have a sound basis to work on—we should then know what direction we can aim at—for satisfactory spelling reform.

The conclusions I come to are, therefore, the following :—

(1) That changes in the direction of simplification, improvement, and uniformity of English spelling are indeed most desirable.

(2) That, so far as elementary instruction is concerned, either of children in the early stages, or of illiterate adults, or foreigners learning the language, the best way of getting over the difficulties of traditional English spelling is to use a Phonetic script, based on the principle of one sound to one symbol, and one symbol for one sound, the words transcribed representing any normalised pronunciation which is accepted as a natural pronunciation by the better educated persons of that district wherever it may be.

(3) That, before the question is settled of getting gradual but effective reforms universally adopted in English spelling, we need more light and more information: a clearer understanding of the fundamental principles underlying the proposed reforms, and fuller information than we at present possess about the goal we are to aim at.

As a last word :—

With the growing numbers and importance of the English-speaking communities in many parts of the world, this question which you have raised is likely to become more complicated and more difficult to solve the longer it is left without some definite answer. The question of a possible standard speech or standard speeches, and ultimately, also, uniformity of usage in the written language, is closely bound up with that of natural geographical boundaries, or—what comes almost to the same thing in language—artificial social boundaries. And it is only continuous or regular contact and constant exchange of thought that brings real and lasting agreement about such a problem as we have before us to-day.

II.—SHOULD EDUCATION DEPARTMENTS TOLERATE ANY REFORMED SPELLING?

By A. H. MacKay, LL.D. (Nova Scotia).

About 20 years ago the Council of Public Instruction for the Province of Nova Scotia authorised the acceptance

by the provincial examining boards of English spellings recommended jointly by the English Philological Society and the American Philological Association. This was partly the direct result of the movement some 33 years ago in England when the school boards for London, Liverpool, Bradford, Birmingham, and more than 120 other towns joined with the philologists in asking for a Royal Commission of inquiry. As the influence of Webster on the American continent was great, there was at the time a very considerable latitude allowed by the dictionaries generally used. But Webster's simplifications made practically but an infinitesimal approach to a scientific economical orthography.

When, therefore, the Simplified Spelling Board with its headquarters in New York, and the Simplified Spelling Society with its headquarters in London, gave a few years ago the second impetus to the reform movement by recommending on the authority of leading English dictionary editors and other philologists and authorities an organised and definitely directed evolution of English spelling towards a more simple and phonetic form, advantage was taken of this liberty of using the simpler forms by many of our scholars and a few of our publishers. The majority of the newspapers of the Dominion of Canada used for years some simplified forms such as "honor" without the French "u." But within the last two years the two Nova Scotian dailies with largest circulation introduced about 200 of the simplifications as a first instalment. A third daily, a weekly, and a monthly have for the same time used the full three lists recommended to date by the Simplified Spelling Board which, though applied only to certain classes of words, simplified some 3,300 individual words. The Civil Service of Canada accepts these spellings from candidates from our Province as they are accepted by the Provincial educational authorities. The reform is growing in other Provinces, in some instances possibly in opposition to their Education Departments. In Nova Scotia the State did not set itself in opposition to a beneficent purposeful evolution led by scholars. To have acted differently would have tended to perpetuate for ever a system developed without any directive organisation with a view to making its efficiency a maximum. As a result, we are experiencing some small inconveniences. When our pupils use books published in England, they are at first disturbed by, then learn to tolerate, old forms new to them. The simplified forms

now used by very many still further unsettle the visual memory.

But the difficulty after all is mainly one for the proof-reader. The printer follows his copy. The reader ceases to be disturbed as soon as he understands that there can be no improvement without the liberty of using the better forms. He sees in the variety of spelling the beginning of a beneficent evolution, not the lack of a knowledge of letters.

But evolution without purpose is a long and wasteful process requiring ages to accomplish much improvement. Modern evolution is more rapid; for it utilises organisation with unity of purpose and co-ordination of effort. Wasteful conflict is eliminated, and the convergence to the end planned is rapid.

This movement, I am taking for granted, we all consider inevitable in the near future. Some of us have been forced to make decisions already. I felt, therefore, that it was a good opportunity, when we have the invaluable privilege of meeting together here once every four years from every part of the Empire, at least to prepare to see, if we cannot arrange to act, in that concert, which is necessary, if we are to avoid the maximum of conflict, and hasten the desired end.

My object now is not even to summarise the reasons for a reform of our spelling, or the difficulties to be overcome. Those of us who have not made a serious study of the problem can do so at our leisure after we part. I am calling your attention merely to the facts, that the leaders of reform are becoming more numerous, and that they see the advantages of reform to be so important to the future of the English-speaking peoples as to be ready to undergo the discomfort of not only revising their own spelling, but of enduring the misunderstanding of the masses of their countrymen who are likely for some time to be unacquainted with their purpose and the advantage endeavoured to be secured for posterity. Even many of our eminent authors in literary Academy assembled—men who have spent a lifetime in balancing words—are apt to accept the diseases of written language as of the essence of literature itself, because of their one-sided mental associations.

They never think that the present system is estimated on many good authorities, which can be easily tested, to waste at least two years, on the average, of study-effort in the elementary eight years of school life of every individual

around the globe who learns to write English. They do not think of the extent to which the spread of the English language among many races in every part of the Empire is handicapped by our defective spelling system. They do not think of the system as really destructive of the history of the language, but sometimes imagine the single significant or non-significant incident embalmed in exotic letters in a word is its real history which should be always borne on its face.

Yet these same people would not maintain, that a rough knot should be kept on the handle of every hoe, so that the man with the hoe would be constantly conscious of the fact that the primitive handle was a rough branch plucked from a forest tree. Nor would they insist that our steam, gas, and electric carriages should sport a pair of functionless shafts, to keep the public constantly in mind of their predecessors—the horse-drawn truck.

Words are instruments of thought-communication. Their histories are all too long to be carried about on their faces or their bowed backs. The dictionary or the tomes of ancient literature itself, are the places where the histories should be displayed. But the man with the hoe is still compelled by our education departments and institutions to spell “tho” with an “ugh” attached to it—to remind him of—what?—although without this knot he could hoe twice as fast.

When some Academicians have such notions with respect to spelling, and would have the system forced on every child who learns the language, to perpetuate the blunders of the past for ever without any possibility of improvement, we need not be surprised to find that the multitude at first know no better, and that the solitary reformer is subject to much personal discomfort. No one is likely to go into this movement for fun. It requires patriots of sterner mould.

No allusion need be made to the history of spelling reform in other languages. It is quite clear that civilisation is now developing so as to be able to organise and carry out any reform which can be shown to the majority to be an advantage. Old customs, old forms, old ceremonies, are not at all in the same category as old spelling. Spelling is an instrument for constant use. Ceremonials are museum-stored relics of historical development exhibited on account of their picturesqueness or aptness for the representation of the past. Our dictionaries and old

literature will keep the curiosities of spelling for us, without loading down uselessly and perversely the hourly working energy of the world.

The two general alternatives open to us appear to be:—

- (1) To maintain the orthographic standard of some one dictionary for ever, recognising no attempt at change.
- (2) To agree to tolerate improvements sanctioned by specified eminent authorities. This will at least allow the principle of evolution to come into play. And, of course, here will arise a conflict as to the authorities to be specified.

At the last Annual Convention of the editors and publishers of the newspapers of the Atlantic provinces of Canada, Dr. Soloan, Principal of the Provincial Normal College, asked the press to adopt the recommendations of the Simplified Spelling Board. The only adverse critic stated that the Education Department should take the lead, when the press might be expected to follow. They are both too coy of leadership, however, although they both agree in the meantime to tolerate the recommended simplifications. There has been some newspaper discussion—mostly serious, but good-natured. It is carefully kept from being a party question. In fact, the conservative press leads the reform at present in practice.

The education policy is criticised in some respects very vigorously; but there has been so far no factious opposition to the attempt to improve our spelling.

This experience leads me to think that if the statesman and other thoughtful and far-seeing men in both political parties should agree to support a progressive simultaneous simplification of spelling every four, five, or ten years, as recommended by a Board of leading representatives of the great English language scholars, publishers, and men of affairs, we might be able to move in concert throughout the Empire, if not also throughout the English-speaking world. The new list of spellings each lustrum would certainly be sought for by millions with more interest than the annual fashions from Paris. Once it became the fashion it might become an effective and cheap substitute for some of the more expensive search for novelty until our orthography became perfectly phonetic.

I am aware that many reformers do not like the notion of small and many instalments of reform. I am ready to try great and fewer instalments. But I think our people would find the former plan more simple and easy.

We should not expect old and busy writers to learn new spelling. The consciousness of having to think of one's spelling would certainly inhibit the flow of thought. But there is no necessity for this. The printer can set the type according to the rules of his printing house. Some can afford to change their spelling; but we should not expect it, nor should we demand it. It might well be laid down as a rule, that no one should be *required* to learn to spell twice. The new spelling should automatically come in with the young, who also should be required to learn to spell only once in their lives. Every four years we might have a new instalment of reform; but we can so easily adjust conditions to these phases that they may be more picturesque than troublesome. The man who would bear the brunt of the labour would be the proof-reader, and the teacher in the higher grades, in secondary schools and colleges, who might have to distinguish between the different degrees of reform. But even that would be unnecessary, as all words in the old English spelling with which we started the movement, up to the most newly sanctioned forms would be *proper*. It might be an apparent reversion to the styles of spelling in the time of Shakespeare; but with this difference, viz., that every new spelling would now proclaim the advent of a world force of order leading us and all to a simple, speech-picturing notation of language.

But objectors will be sure to say, the language will still change; and we must change our spelling to picture it. Is not that one of the great advantages which a phonetic system can promise? What would not our phoneticians and philologists give for such a record of the changes in our language for even three or four hundred years back?

To this it must be said, that our unphonetic spelling at present is responsible for much change in pronunciation, although by no means all. The change to-day all over the world is going on at a very much slower rate than in the island of England before the time of popular education. Defective as are the keys to pronunciation in our dictionaries, there is evidently more stability in the quality of speech at the beginning of this century

than ever before. With a phonetic alphabet in sight, we should be able to transmit speech down the ages with more precision and uniformity than has ever hitherto been imagined.

Before phonetic spelling can be perfectly accomplished, we must have a commission of scientific phonetic experts, to decide which of the various qualities of vowel and consonant sounds are most musical and most equidistantly distinct from each other. The standard sounds of the new phonetic alphabet are recordable on the *phonograph*, and are therefore capable of being indefinitely copied, and transmitted to every teachers' training school in the English speaking world. The teachers in turn would then be able to reproduce in the schools approximately the standard accent of English. Thus in a word, can not only our written, but our spoken, language be made not only more effective, but more uniform in regions poles apart, and more unchangeable in time, than mankind has yet experienced. All this can be done by the new evolutionary method,—when organised governments can confer, and plan, and agree to co-operate with a view to a common desired end.

I conclude by simply stating some of the more general lines of action which appear to be recommended by those discussing the problem:—

- (1) Shall we select some dictionary with its artificially and prematurely arrested development of our spelling as a practically unchangeable standard for the future? or
- (2) Shall we tolerate as an alternative, or as a supplement, the use of the simpler and more phonetic forms of spelling recommended by our leading language scholars as being in the line of evolution towards a simple phonetic system which promises to be the most effective possible for all language purposes? or
- (3) Shall we attempt to introduce a simplification at one instalment which will save, say, a year of learning effort in the elementary schools? or
- (4) Shall we endeavour to standardise our vowels, for instance, reducing them to the fewest desirable equidistant sounds capable of the most distinct reproduction by the vocal organs and the phonograph, and create a phonetic alphabet of minimum rather than maximum range, with the most distinct possible visual forms for print

and script, to be taught in our elementary schools at first as a second form of written English ? or

- (5) Shall we for the present merely continue our study of the problem ?

A discussion followed, in the course of which Dr. W. J. VILJOEN (Union of South Africa) contributed some very interesting information with reference to various steps which had been taken in South Africa to simplify Dutch orthography and grammar. The substance of Dr. Viljoen's remarks is given below :—

Some little time ago there was an interesting controversy in South Africa on the question of the introduction of certain simplifications in Dutch orthography and grammar. Naturally, there was a great deal of opposition to any change, but the opposition in this matter, not only in the Netherlands, but also in South Africa and elsewhere, was somewhat different from the opposition which might be expected with regard to any change in the spelling of the English language. For in the nineteenth century there were no less than three modifications in the Dutch system of spelling, the first known as the "Siegenbeek Spelling" of 1804, the second introduced in 1864, when the big Dutch Dictionary was begun by De Vries and Te Winkel, and finally the system of spelling introduced by the Society for the Simplification of Dutch Orthography in 1895. In the case of English, however, the system of spelling, with some slight modifications, has remained unaltered since the days of Shakespeare. The people of Dutch descent in South Africa, far removed as they are from the scene of good Dutch literature and the sphere and atmosphere of Dutch culture, and with two languages existing side by side, naturally felt, perhaps more than would have been the case otherwise, the necessity for doing everything possible to preserve the purity of the Dutch language. They were, therefore, all the more ready to support a movement started by the most eminent scholars in the Netherlands and Belgium which was intended to simplify, without breaking the bonds of continuity, the written form of the Dutch language. The people of Dutch descent in South Africa are not naturally more lazy or more inclined than others to make the work of speaking or writing as easy as

possible, but they thought that every honest attempt that was being made in South Africa to preserve the Dutch language in as pure and grammatical form as possible and at the same time securing its greater simplicity of construction was worthy of whole-hearted support. The time saved in this way at school could be spent to better advantage, and it was with the object of allowing the young people to make the best use of their educational facilities that the body known in South Africa as the "Taal Bond" took the initiative in the matter of reform and simplification of Dutch spelling and grammar.

In 1903 Dr. Viljoen, while on a visit to Europe, was deputed to interview the authorities, professors, and others in Holland and Belgium interested in the study of the Dutch language and submit to them the proposals made by the "Taal Bond" for the simplification of Dutch spelling and grammar. Most of the persons he consulted were staunch opponents of the movement, so far as Europe was concerned, but they agreed that it was in the interests of the Dutch language of South Africa to recognise officially the proposed simplification. On Dr. Viljoen's return to South Africa the "Taal Bond," strengthened by the opinion and support of the educational authorities in Holland and Belgium; approached the Education Departments concerned and the Council of the Cape of Good Hope University with a view to having the proposed simplifications gradually introduced into the schools throughout South Africa. These bodies approved the proposals and made provision for a period of transition, extending over four or five years, during which the two systems of spelling were allowed to run side by side.

The present position is that practically every boy or girl who takes up Dutch as a subject is being taught the language in its simplified form. The writing of books in the simplified form of the language has been encouraged, and many works, not only for school use, but also those of real literary and scientific value and, among them, bi-lingual dictionaries, have been published in the simplified spelling.

This movement has greatly contributed towards the improvement in the teaching of the Dutch

language in the public schools of South Africa. It has also resulted in the saving of time which would have been devoted to teaching delicate paper points of grammar and spelling. English too has benefited, for it is generally agreed that in a bi-lingual country the two languages should be taught in such a way that those who will afterwards be required to use each language may leave school with a good working knowledge of both, and Dutch in its simplified form bears a much closer resemblance in point of grammar to English than it did before.

Dr. Edwards must prepare himself for a great deal of opposition, for the great majority of people are averse to breaking away from what has been cherished for centuries and what binds them to the past. But spelling, it should be remembered, is after all an instrument, or a picture, and a very imperfect one, of the language in its true form. It should never be mistaken for language in its real being or essence. Spelling should, therefore, be expected to change from time to time, for only in that way can a true record of the changes that have taken place in the history of the development of the language be preserved for the student of comparative philology.

For the reasons above given, Dr. Viljoen is glad that, so far as, at least, one of their official languages is concerned, the people of South Africa are fortunately situated in this respect, and he is prepared to support any movement intended to bring the written and spoken form of English more into line, one with the other. Dr. Viljoen is opposed to any system of reform by too rapid instalments. Those who have learnt a certain system of spelling will naturally adhere to it, but there is no reason why they should object to the introduction of changes for the sake of those who follow. Some of the finest Dutch scholars in South Africa, ministers of religion and others, still adhere to the spelling of 1864, and there are several cases of eminent scholars whose language, so far as spelling goes, still preserves the appearance of 1804. The younger generation of South Africa feels that every time it has the painful task of burying one of these fine old landmarks, it also has the pleasanter task of burying their orthography as well!

At the conclusion of the discussion the following resolution was put and carried unanimously :—

“ That this Conference is of opinion that the simplification of spelling is a matter of urgent importance in all parts of the Empire calling for such practical steps in every country as may appear most conducive to the ultimate attainment of the end in view—the creation, in connection with the subject, of an enlightened public opinion, and the direction of it to the maintenance, in its purity and simplicity among all English-speaking peoples, of the common English tongue.”

NOTES ON THE PSYCHOLOGY OF THE NEGRO CHILD AND ON THE ADAPTATION OF PRIMITIVE CUSTOMS, MANNERS, LAWS, AND TRADITIONS IN A SYSTEM OF EDUCATION.

Paper prepared by Mr. R. F. Honter, Director of Education, Sierra Leone,

and submitted to the Conference by H.E. the Governor of Sierra Leone.

An experience of fifteen months in the Colony of Sierra Leone has afforded some opportunity of personal observation and the acquisition of evidence on the life and training of the negro child ; any conclusions I may appear to draw in these notes must therefore be regarded as stages in a course of study which is still being continued. I have attempted to record facts as accurately as possible ; these might be of some use to the student who has already gained the position where he is able to appraise them at their full value.

I am more intimately acquainted with the population of what is called the Colony of Sierra Leone than that of the *hinterland* or Protectorate ; my knowledge of the latter is founded on the experience of others, though I have some personal acquaintance myself of the country, particularly in the South-Western or Sherbro country. But there are in Freetown, the capital, four Mohammedan quasi-Government schools where the native as distinguished from the Creole child may be studied as a type which

only to some small extent, has been modified by town conditions.

The Colony is inhabited by the descendants of liberated Africans and immigrants from various parts of the West Coast, stretching from French Guinea to the Congo ; from time to time Kroos from the Liberian Coast and Mendis, Timnes, Foulahs, Susus, Mandingoes and others from the Protectorate have settled in the Colony, particularly in Freetown. The Mohammedan community in the Colony is almost exclusively composed of people from the Protectorate, though one hears of Aku Mohammedans, the Akus being an important section of the Creole population. The Creoles, after all, are mainly the descendants of peoples from the Niger country, settled by the British Government in the Colony. Roughly speaking, they have had the privilege, or otherwise, of European education and civilisation for a hundred years. Clothes and boots were imposed on them by well-meaning administrators in the past, though I find on record in Dr. Madden's Report on Sierra Leone in 1840, that the inhabitants, though they wore shoes in church for the sake of respectability, removed them from their feet on the way home for the sake of comfort. This incident is given as an illustration of the process of civilisation : another incident may be quoted as typical of the results as observed in the Creole "man-in-the-street." Tombo was once a flourishing village ; it is situated in the most fertile belt in the Colony ; the District Commissioner, on a recent visit, offered seeds of all kinds, suitable to the soil, to the Head-man, for planting ; he courteously refused the offer ; their grandfathers had been "made" to plant trees by the managers, the local commissioners of those days, and they preferred to sit and enjoy the fruits of their labour ; he could not be persuaded to toil for himself or his descendants. Languor, induced by the climate, is certainly a powerful factor in arresting progress, but one has to contend also with a species of moral inertia in many villages.

In this paper, I shall refer to the inhabitants of the Colony proper as Creoles, and the peoples of the Protectorate as natives.

The Creole child is, so far as I may judge, distinguished by remarkable powers of memory and a tendency to take himself and life seriously. The gay geniality which marks the people at large appears to develop from the youthful stage onwards. Speaking superficially, the former trait may be the result of the local system of education, the latter of

his early life and impressions, which are confined to facts like severe manual labour, frequent deaths, and the importance of food.

The Creole child, again, as one naturally expects, tends to the simpler conventions of "native fashion," the further he lives from Freetown. There is not, merely, the difference between the town and the country child; there is the remarkable difference between the effects of European and native conditions of life. Education has produced some individuality in the people of Freetown and its environs; the tendency to communism increases in direct proportion to the distance from Freetown and the railway from Freetown to Waterloo, a small town, nearly 20 miles from the capital.

Remembering these conditions, I shall first deal with the system of primary education in the Colony. Apart from Fourah Bay College, affiliated to the University of Durham, four secondary schools for boys and three for girls, with an average attendance of about 900, 7,000 children attend the primary schools in the Colony at the time of writing. The three R's, History, Geography and Grammar for the higher standards and Sewing for girls made up the curriculum for these schools in the past. As far back as 1840 and 1865, efforts were made to introduce model farming, with no result. In recent years, kindergarten methods have been introduced into the infant departments and some hand and eye work in a few standard schools. But the Creole child, outside Freetown, commences at a very early age, in fact as soon as the child finds its legs, to carry for its parents. The next stage is farm-work and the marketing of the produce of the farm. By the age of 12, the child has some considerable acquaintance with the elements of local agricultural methods, fishing or boat-work, and salesmanship. Apart from this regular labour, at certain times of the year when grass is cut for thatching the roofs of their houses, or ginger is being cut or planted, there is a considerable falling-off in the attendance of schools outside Freetown. Attendance at school is usually one item in a long day's programme.

In the Protectorate, apart from the Bo School for the sons and nominees of Chiefs, there are Missionary and Mori (Mohammedan) schools. The Roman Catholics and the United Brethren in Christ, an American Society, generally emphasise the place of industrial and agricultural training in a system of education; the others, on the whole, up till now, have afforded facilities for elementary

"literary" instruction only; all devote some time to religious instruction. The Mori schools devote themselves exclusively to the study of the Koran and in some cases, Islamic law. With few exceptions, they are itinerant, *i.e.*, the teacher "keeps" school for weeks or months in one town and having obtained his remuneration, generally in kind, proceeds to another town where he repeats the process.

The majority of native children have no education from the European point of view; there is, however, education, in the larger sense, in what is called the Porro and the Bundu Societies, for males and females respectively. At the age of puberty, youths and girls retire into the seclusion of the Porro and Bundu "bush" for weeks or months as the case may be, in the dry season. Here they are taught the right methods of sexual functions, the duration of adequate periods for recuperation after child-birth, the methods of cleanliness and so far as I am aware, the duties and to a certain extent, the privileges according to their birth in a ruling or non-ruling class, of men and women who will be the fathers and mothers of the coming generation. I have said above that this instruction lasts weeks or months. Hence arises a difficulty in the Protectorate which I have met in the remoter districts of the Colony. The parents cannot understand why the white man's "learning" should demand a much longer time than their own. Some missionaries have informed me that it is difficult to induce parents to leave their children at school for more than three months.

Again, the native parent, as a rule, values education in proportion to its practical results. In an interview with the head-wife of the chief of a fertile belt, I was told as I have been by many other leading natives, that they did not want a school. A school made them disinclined to work; if, on the other hand, the children were taught to "brush farm good fashion," to "carpenter work" and to have knowledge which would help them in trade, they agreed promptly.

Next, there are the points at which the Creole child comes into contact with social life. In Freetown, children on the whole have a minimum of carrying and selling work; of course, they have to perform their due share of house-work. But there is the more important aspect of their environment. Mechanically trained into fluent reading, copybook writing, and very little composition, some

accurate numbering, and generally using a very barbarous type of "pidgin" English, outside the school, as the medium of conversation, the child becomes the loud, arrogant youth, because he believes he has been educated. This loud-voiced and pretentious arrogance has been attacked by a recent writer on Sierra Leone. Sympathetic study compels one to a conclusion which might explain this phenomenon. Apart from the value of the education acquired, the lad, trained to a white man's civilisation, is puzzled because he is not acknowledged as a man who has mastered the white man's standard. In self-defence and in ignorance, he assumes an arrogance which appears absurd to the on-looker.

The Freetown child, at an early age, in the home, the school, the church, and even the streets, gains what may be called European impressions. The official, the professional man, the trader, the artisan, these are the types which determine his aspirations. His education, his clothes, his games are European; the great ships in the harbour, the railway, the local garrison, all these impress on him an idea of life altogether different from those outside Freetown. Early in life he learns to differentiate between work for gentlemen and those who are not gentlemen. Both boys and girls in Freetown certainly have a distaste for manual labour unless it is done by the white man. In recent years the railway, which employs white men to undertake manual labour, has helped to break this prejudice down. But after all, is there any gain if the Creole lad thinks that this form of labour has been admitted to the category of "gentlemen's work?"

Outside Freetown, the economic question dominates even the infant horizon. Sufficient food is a fundamental condition; hence the child must work as soon as it walks. The school which attracts because it breaks the monotony of work, the church with its joyous and yet morbid associations, the excitement of an occasional traveller, the change of seasons from the dry to the rains, a visit to another village or to Freetown for trade, all these are incidental to a life which is devoted to the minimum of necessary labour which provides them with a sufficiency of food. The Creoles are great child-lovers; they insist on their children being well-fed, well-covered—the child sees the world from its mother's back. When it descends to earth, it begins to contribute to the family resources by carrying. In the result, infancy is of short duration; it takes its place in active, working life before, say, the

European child. At an early age, the noisy, yet impressive festivals of marriage and death, are a commonplace. Life is a solemn procession of working-days till the day of death. Beyond its own village, school and church, there is for the child apparently no interest or need for interest.

This latter conclusion is modified when one treats of the child as an imaginative being. Tropical darkness in the West African bush is a fearsome thing; it is all the more so, as kerosine oil is not cheap and the people cannot afford even to dispel the darkness of their houses. One would, therefore, think that the child would soon be inured to darkness; and yet, to the child, the dark is full of dread, wicked spirits, often visible in the form of animals, the fear of which no teaching about the love of God will destroy. It continues in the adult; he fears cemeteries after dark, he believes in the potency of "medicine," ju-ju, and the power of the Porro and Bundu devils who are, after all, human beings covered with their insignia of office. To some extent, of course, this fear of the dark is common to children in a higher civilisation, but it appears here in an intenser form. Apart from this aspect, the child's ideas do not appear to soar above the village and the facts of life in the village. One wonders whether the imaginative faculty is dulled by its mechanical initiation into life.

The Creole child on its way towards a conception of morality, as laid down in an European code of ethics, affords some lessons typical of an African. On the whole he is obedient; he never appears to have been persuaded, morally or otherwise, into obedience; the rod need never be used to any extent in the home or the school. He begins work so early that he appears to be naturally obedient; of course, like children elsewhere, he disobeys commands from time to time; but this disobedience is charged invariably with so much solemnity and so very rarely with laughter that it has appeared to me that the small mind was merely protesting against a change of well-known routine or the caprice of the parent or guardian.

The child's conception of truth, or its progress towards that conception, affords valuable lessons to those of us who are responsible for the education of these peoples. The native conception of truth, so far as the white man is concerned, appears to me, so far as I have observed, either based on what may be termed "self-persuasion," *i.e.*, a repetition of what the speaker thinks should have occurred,

or a way of paying a compliment to a higher intelligence, *i.e.* the exact occurrence should not be reported but some other version related; as an intelligence which is superior, should, owing to that superiority, be able to challenge the veracity of the speaker and sift out the truth. With the Creole child I have been able to observe much that was instructive, from infancy to the age of 15. What is laid down by the parent, the minister, the teacher, is, as a general rule, the truth. In fact, the statement attributed to the great Jesuit, "if the Church says white is black, you must say it is black," is true of the Creole child. A lesson given on the sea-shore at the incoming tide gives a partial illustration of this statement. The wash round a big rock gave rise to a large wave on its north side which, each time, swamped the smaller wave on its south side; these were called "man-wave" and "woman-wave" respectively. It is usual to distinguish, in Creole patois, the male and the female sex, by saying, for instance, "man-dog" and "woman-dog." The children to this day do not swerve from their allegiance to what is to them, the fact of the "man-wave" and "woman-wave." If you meet children with their parents, on your evening's walk, after the day's work, in the village, and you ask them if they had been to school that day, the parents, usually the mother, ask the child "you done go school to-day," the answer in 80 cases out of 100 is "I done go" whether the child has gone or not. The question "you done go" is equal to "you went, didn't you," and the physical authority of the parent imposes on the child an erroneous conception of truth.

The sense of co-operation even in the educated African seems to contend with what the European may designate the moral sense. I have observed classes of children from 7 to 16, set to work out a sum in arithmetic, at first working individually and then, unless the teacher interfered, consulting with each other over the result; on inquiry, in many cases, I have discovered that the majority of those who had attained the right solution preferred to abide by the verdict of the majority of the class rather than trust in themselves. It is not so much a matter of copying as a trust in the good sense of the many. This idea manifests itself in its most emphatic form in the tribal system.

Again, in the heat of the afternoon, it is no unusual sight to see the smaller children fast asleep while the bigger "infants," toiling away at the task set before them,

bear the burden of the weight of the smaller ones, manfully, without any complaint.

There is another side of child-life in the Colony which, to a certain extent, acts as an index to its mental self. Apart from domestic and farm labour, in all schools, children are taught drill, musical or otherwise; this has been more highly developed in Freetown than outside Freetown. The children practise these exercises with gusto and always, whether at the beginning or the end of the day, demonstrate their joy in such movement. Efforts have been made to utilise these exercises for elementary physiological purposes. Some, I fear only a few, grasp the differences between the several parts of the body, but the main idea seems to be that these exercises constitute a school game which must be played as well as the unit can, because the majority try to do likewise. There is no attempt at understanding; like all children they delight in physical activity, but like African children they feel their relation to the community and the society and follow the teacher or head boys and girls, endeavouring to contribute their share to the general result.

The same idea of the community or society appears to underlie some evening games peculiar to these children. In one game, one child tells what is called a "story" to a ring of children. In Freetown, the child refers to the activities of a town community. He will begin by saying "water stands"; he will call upon one of his listeners to give another instance of "standing"; the answer may be "sugar-cane stands" and so on. The game appears to have been modified by the greater civilisation of Freetown. Away from Freetown, I have heard the "story" begun in the words, "Bocka, Borka" (the meaning of which I have been unable to trace) and the auditor's reply was invariably "Sierra (Sa) Leone da cook rost bif." Inquiry has failed to give me any satisfaction with regard to the reference herein; the only clue afforded is by the explanation of the adults that they cannot get away from their position in the community. The game appears to be a demonstration of the process of playing either in communities or in relation to the community.

Apart from the European games which are played in the Colony, and from the above games which refer after all to the "food" problem, traces may be discovered of the origin of the Creoles in the virginal dance at the full moon, the Aku dance where the child represents a "devil" or "animal" and is clad in grass or leaves, or the "moon-

shine" game where, in the moonlight one child lies down, spread-eagled, and the others limn his outline on the ground with pieces of broken slate or china; the children then dance over the figure, throw the pieces together, and then proceed to repeat the drawing again.

The child appears in a world where the atmosphere is redolent of spirits, good and evil, but mainly evil; all qualities of these spirits have connection with the functions and events of life: he never appears to get away from the hard facts of life. At a very early age, most of them are earning some small amounts, others pick up remnants of food and a few even beg, though the gift is called a "dash."

In the result, education must begin with something of commercial value. Some time in the future, education might be valued for its own sake, but the first step has to be in the direction of returns in money or kind. It appears to me that this is the only way in which education can be successfully introduced.

There is one outstanding feature of general African life which is being utilised, in some degree, in the educating process. These people have a vivid idea of co-operation in production. Africans must have their leader in every action of life; even 17 bearers must have their head boy, and the produce of labour must be divided according to the work done. The child or adult who plants, who tends the plantation, or sells the produce, must have his or her share in the produce. School farms can be worked successfully in this way; the boy will cheerfully study improved methods, the elements of agricultural science, and even scientific salesmanship, so long as he is assured of his just proportion of the result.

Finally, a large general question arises from the educational activities among these people. The answer to it will affect the Protectorate peoples much more than the inhabitants of the Colony. They are possessed of a strong communistic sense; each individual has his or her place in the general economy; the affairs of the community are discussed by the community, but in the circumstances the chief or the Head-man has large powers in influencing public opinion. Education does develop the individual and to a certain extent undermines the communistic system. There are advantages in the latter, but education will tend to destroy objectionable features in it, like, for instance, a species of domestic servitude. Beginning with Freetown, the country appears to be grouped round

in graduated, cyclic districts, showing the gradual displacement of some of the disadvantages of the communistic system. There is an artificial boundary between the Colony and *hinterland* for administrative purposes, but one cannot deal in this way with children who are sensitive from their earliest years to changes and tendencies in the community. There is no concentration just now in the educational system for the whole country; there is some loss, as the African is strongly influenced by concentrated forces. One system, elastic and progressive, alone can deal with the rather complex problem afforded by the Colony and Protectorate.

MEMORANDUM ON "THE BEST METHODS OF TRAINING CHARACTER AND INCULCATING A HIGH MORAL STANDARD IN UNIVERSITIES FOUNDED PRIMARILY FOR NON-CHRISTIAN RACES WITHOUT THE COMPULSORY TEACHING OF THE CHRISTIAN RELIGION."

By Sir F. D. Lugard, K.C.M.G., C.B., Governor
of Hong Kong.

Few or none will be found at the present day to controvert the proposition that in a University open to all creeds it is impossible to teach the Christian Religion compulsorily. On the other hand, it is difficult, if not impossible, in a University established in a British Colony to give religious instruction at the option of the parents in religions other than Christianity (*e.g.* Mohammedanism, Buddhism, Hindooism, Confucianism, &c.). The solution has, therefore, commonly been to exclude religious teaching of all kinds. The result of Western education is admittedly to undermine Eastern belief, and thereby to disorganise much of the social life which among Eastern peoples is usually so intimately bound up with religion. The impact of a purely Secular Western education upon Eastern peoples has, therefore, a tendency to deprive students of their national religion and to substitute nothing for it, while the study of the philosophic theories of the West, of political economy and of Western history, with its outstanding examples of the emancipation of the people from oppressive control, are all apt to fire the immature imaginations of imaginative races and to impel them to conclusions destructive alike of the

family influence, on which the social system is so largely based, and of all constituted authority. They are apt to imagine that the parliamentary and self-governing institutions which Western nations have evolved to suit their own conditions and character are equally suitable for the East, in which in all the centuries covered by history they have never been evolved and to which they may, therefore, be considered to be probably unadapted—and in their efforts to achieve these novel ideals they become revolutionaries and separated in sympathy from the bulk of their own race. Parents who observe these tendencies, and dread their results, fear to send their sons to Western Universities. What is the solution of the problem, which was recently concisely stated in the following terms by the “Times” (Educ. Supp. 3.1.11). “Can Western Education divorced from all religious teaching supply a code of morality to take the place of the ancient indigenous codes of which a purely secular education tends to sap the inherited religious basis.” It was dealt with exhaustively in a Blue Book issued by the Government of India in 1890, which contains the views of many of the highest expert authorities both on education and on administration in India at that date. The results of that inquiry, as judged by the events both in India and in Egypt of the last 20 years, do not appear to have been very satisfactory. The writer quoted speaks indeed of “the disastrous effect upon the rising generation of the complete severance of secular education from all religious sanction, and from the moral influences bound up with religion.” In 1904 the Governor-General in Council issued a resolution on Educational Policy in which the following passage occurs:—“In Government Institutions the instruction is, and must continue to be, exclusively secular. In such cases the remedy for the evil tendencies noted above (*i.e.*, want of discipline and the spirit of irreverence) is to be sought, not so much in any formal methods of teaching conduct by means of moral text-books or primers of personal ethics, as in the influence of carefully selected and trained teachers, the maintenance of a high standard of discipline, the institution of well-managed hostels, the proper selection of text-books, such as biographies, which teach by example, and above all the association of teachers and pupils in the common interests of their daily life,” which was in fact an amplification of a passage which occurs in Sir A. Croft’s report on page 141 of the Blue Book, where

he writes :—“ Instruction in morality should not be limited “ to special text-books, or confined to fixed lessons two or “ three hours a week, but should be regarded as pervading “ the whole course and system of instruction.” The Chinese, as the late Lord Salisbury once said, are among the most tolerant of people in the matter of religion, and in Hong Kong Non-Christian Chinese who have no sympathy with Christianity have been willing to send their sons to a College (St. Stephen’s) conducted by a religious body, where a certain amount of religious teaching is given, and where there is no restriction on the influence which devout Christian teachers may exert upon pupils out of school hours. They were prompted by the knowledge that the religious sanctions therein inculcated, even though they themselves had no personal sympathy with them, exercised a restraining influence, and the students neither shewed themselves to have imbibed socialistic or revolutionary ideas, nor to have cast off that reverence for the family and its elders upon which the Chinese set such store. But though the experiment has succeeded at the school named, I cannot disguise from myself that in the first place it is largely due to the personal influence of its Head, and in the second place that what may succeed with a school for boys may not necessarily succeed in a University where the field of learning is much more extended :—or, in other words, that there is not so much in the scope of a boy’s learning to undermine his beliefs as there would be in the scope of an undergraduate’s. The problem before us in opening a University in Hong Kong is how to train character, to create moral ideals, and to give to them a vital and compelling force in the creation of character and the conduct of daily life, without basing them upon religious sanction, or at any rate without introducing compulsory religious teaching. The English boy when he goes to school has (it has been well said) not only the religion taught him from his cradle, but is the heir to 1900 years of Christian environment—an environment which has permeated all the custom, the law and the social tradition among which he lives. The Oriental boy has no such atmosphere, and if his belief in his Hindoo theology, or in his ancestral worship, is shattered by his Western learning he has nothing to replace it.

So far we propose to meet the difficulty in the following ways :—

- (a) By allowing religious bodies to establish hostels, in which they will be at liberty to teach the

- Christian (or other) religion, provided that they conform to the regulations laid down by the University.
- (b) By bringing the best influences to bear on the remaining students who will be compelled to reside in the University under close control of a carefully selected staff, and by encouraging outdoor sports in which the staff will find opportunities of associating with the students.
 - (c) By carefully selecting the text-books, &c., so as to hold up the example of the lives of great men, whether of Eastern or Western origin, as models of high standards of life and high ideals.

But I personally believe that even these precautions are but palliatives, and that what is required is that those who are engaged in the teaching of Orientals should adapt their methods to the requirements of the East instead of attempting to foist upon the East a system identical with that which in the West has by the process of natural evolution proved its adaptability to the particular circumstances of the West. The lessons of history in the East may point to an opposite conclusion to what they have taught in the West. The unit of national life in the East is the family—and the preservation of the *patria potestas* modified (but very gradually, as in Japan) by adaptation to Western methods of social life is essential. It may therefore form a page in the political economy of the East, which is unnecessary in the West. The lines of Eastern thought, the currents of Eastern feeling and emotion must be studied by those who would instruct the East, with entire detachment from pre-conceived ideas adapted to nations which are the outcome of 1900 years of Christianity. The text-books used must be prepared for and adapted to Eastern students. These are mere discursive views—and I advance no claim to be an “Educationalist.” They are noted only by way of making clear the problem, to which I invite attention, which is, how in advanced educational institutions such as a University in the East, the social tradition and atmosphere created by Christian education in childhood by tradition and environment, and by the unwritten moral code of the West can be replaced; and if the driving force, and the compelling power of religious sanctions be not directly employed, what is to take their place in the training of character.

A note on this subject, however brief, would be incomplete without some allusion to the volume recently

published by Mr. Chirol—"Indian Unrest" (Macmillan, 1910). On page 268 he names four characteristics of the existing scheme of education in India.

(1) Absence of direct Government control over educational institutions. The scheme of the Hong Kong University from its initiation has included representation on Court and Council, while the Governor will be Chancellor, and the Chief Educational Officer will have a seat on the Senate.

(2) Concentration on higher education to the neglect of the schools which will train for the University. In Hong Kong the University has been founded only as the last step in a system of primary and secondary education which had (with the College of Medicine, &c.) already produced boys qualified to matriculate. Simultaneously with the inception of the project the school educational system has been overhauled. Representation on the Governing Body is accorded to nominees of the Grant and Government Schools of the Colony so as to promote close touch between them. It is, however, true that students who otherwise would proceed to Europe or America (or if unable to bear the expense would have to forego a University education) will be admitted from schools in China, but this is an inherent characteristic of the scheme which is admittedly framed to assist China, and which has been liberally supported by Chinese.

The third criticism refers primarily to schools for boys and condemns the sole use of English as the medium of instruction. The criticism does not apply to Universities where (as here) it is necessary that Western knowledge should be conveyed in a Western tongue. The fourth is the problem already dealt with as to neglect of the vital side of education, which consists in formation of character. It may incidentally be noted here that the Indian Universities "are almost exclusively examining and not "teaching bodies, and as the colleges affiliated to each "University are scattered over a wide area, there is very "little contact, either between professors or between "scholars. These Universities being also non-residential "afford none of the collegiate life which is so valuable a "feature of our home Universities." In each of these respects the Hong Kong University affords a direct contrast in method. Another important contrast between the Indian system and that which will be adopted here lies in the fact that in India, in the teaching staff both in the Colleges of the Universities and in the secondary schools,

the proportion of native to British teachers is overwhelming. "From the point of view of moral training and discipline and the formation of character, the results have been disastrous," writes Mr. Chirol (page 215). In the Hong Kong University the staff will be wholly British, except, perhaps, in regard to a few specialists in Chinese language and literature, and I may add that of late special efforts have also been made to raise the proportion of British teachers (both in relation to Chinese teachers and to the number of pupils) in both Government and Grant schools throughout the Colony. Again, Mr. Chirol points out that in India the pay and prospects of the few Englishmen engaged in education are not such as to attract the best type. "Considering (he adds) how immeasurably more difficult is the task of training the youth of an entirely alien race according to Western standards—the conditions should be such as to attract not average men, but the very best men we can produce." This view has been consistently held by the founders of the Hong Kong University, and the ignorance of the professor from England of the character and customs of an Oriental people when he first arrives, will, it is hoped, be compensated for by the knowledge of the Chinese—possessed by lecturers who are in local practice, as medical men, engineers, &c., by the close association of Chinese-speaking officials, and of Chinese gentlemen on the Governing Body, as well as by the mission hostels conducted by men who are in the closest sympathy with the Chinese. By these means it is hoped that parents and guardians will be induced to give to educational officers the support of their parental authority.

"The raising up of loyal and honourable citizens for the welfare of the State" cannot, it is urged, be achieved by a *laissez faire* policy in regard to the moral and religious side of education. "The divorce of education from religion is still on its trial in Western countries which rely upon a highly developed code of ethics and an inherited sense of social and civic duty to supply the place of religious sanctions. Almost everywhere in the East in some form or another religion is the dominant force in the life both of every individual and of every separate community to which the individual belongs. Morality apart from religion is an almost impossible conception for all but an infinitesimal fraction of Western-educated Indians." "The educated European" (wrote Sir G. Clarke) "may throw off the sanctions of religion, but he has to live in a social environment

“ which has been built upon the basis of Christian
 “ morality and he cannot divest himself of the influences
 “ which have formed his conscience.” The Oriental
 educated or partially educated in Western thought has
 no such environment, and the restraints of ancient philo-
 sophies have disappeared and there is nothing to take
 their place (page 352). The very teaching of Western
 knowledge which undermines Oriental beliefs, is in itself
 incompatible (argues Mr. Chirol) with an absolutely
 impartial neutrality in matters of religion. These religious
 conceptions, though opposed to our own conceptions both
 of religion and of morality, provide the ties which hold
 the whole fabric of society together; those ties cannot be
 loosened without serious injury to society. Respectable
 parents complain that the spirit of reverence and respect
 for parental authority are killed by an educational
 system which only trains the intellect and estranges
 youths from all the ideas of their own world. Many
 prove this by preferring mission institutions in which,
 though no attempt to proselytise is made, a religious,
 albeit a Christian, atmosphere is to some extent main-
 tained. Quoting the appeal of the Maharajah of Jaipur
 for religious teaching in all schools, Mr. Chirol urges that
 the resolution of the Government of India of 1904, that
 instruction in Government institutions must be secular
 “ is already out of date and certain hours should be set
 “ apart on specified conditions for religious instruction in
 “ the creed which parents desire for their children.”
 This view, it may be noted, applies to schools for
 “ children ” and not to Universities; it may or may not
 be possible or advisable in India, but it must be noted
 that there are in that country men of the highest attain-
 ments in Western knowledge who have retained their
 Eastern beliefs, whereas no such class exists in China.
 The principle of a broad tolerance in matters of religion
 is not, however, antagonistic to the rules we have laid
 down in our scheme of University education in Hong Kong.
 For if the Chinese exhibit a strong desire to inculcate
 among Chinese students the tenets of Chinese religious
 belief, it is open to them to establish a hostel for the pur-
 pose equally with Christian creeds, provided only that it
 is established bonâ fide on a religious basis, and not for
 purposes of political, provincial or racial discrimination
 and rivalry. It is not, perhaps, impossible, as Mr. Chirol
 argues, that by a broad-minded and liberal policy of this
 kind, some approximation of Eastern to Western ideals
 may eventually be reached.

APPENDIX I.

CONFERENCE ON BI-LINGUALISM.

REPORT OF A CONFERENCE CONVENED BY THE RIGHT HON. WALTER RUNCIMAN, M.P., THE PRESIDENT OF THE BOARD OF EDUCATION, ON TUESDAY, 2ND MAY, 1911, AT 3 P.M., AT THE OFFICES OF THE BOARD OF EDUCATION, WHITEHALL, LONDON, S.W.

After the conclusion of the Imperial Education Conference the President of the Board of Education, The Right Honourable Walter Runciman, M.P., presided at a meeting of official representatives of India, Canada, South Africa, Malta, Jersey, and the Education Departments of the United Kingdom, held on May 2nd, at the Board of Education, to discuss Bi-lingualism in Schools.

The meeting was attended by the following :—

INDIA.

Sir H. RISLEY, K.C.I.E., C.S.I., India Office.

A. G. BOURNE, C.I.E., D.Sc., F.R.S., Director of Public Instruction, Madras.

A. L. COVERNTON, Principal and Professor of English Literature, Elphinstone College, Bombay.

B. HEATON, Principal of the Sibpur Civil Engineering College, Bengal.

W. G. WEDDERSPOON, LL.B., Inspector of Normal Schools, Burma.

S. C. HILL, Director of Public Instruction, Central Provinces.

C. E. W. JONES, Principal of Morris College, Nagpur.

CANADA.

G. W. PARMELEE, D.C.L., Secretary of the Department of Public Instruction, Quebec.

A. H. MACKAY, LL.D., Superintendent of Education, Nova Scotia.

R. MAGILL, Ph.D., Professor of Philosophy in the University of Dalhousie.

SOUTH AFRICA.

THOMAS MUIR, C.M.G., LL.D., F.R.S. Superintendent-General of Education, Cape of Good Hope.

W. J. VILJOEN, LL.D., Ph.D., Director of Education, Orange Free State.

MALTA.

Prof. The Hon. E. MAGRO, M.D., Director of Public Instruction and Rector of the University of Malta.

JERSEY.

Sir WILLIAM VENABLES-VERNON, Bailiff.

SCOTCH EDUCATION DEPARTMENT.

W. H. WARRE CORNISH.

BOARD OF EDUCATION, ENGLAND AND WALES.

Sir ROBERT MORANT, K.C.B., Secretary.

A. T. DAVIES, Secretary, Welsh Department.

OWEN EDWARDS, Chief Inspector of Schools (Welsh Department).

H. F. HEATH, Ph.D., Principal Assistant Secretary (Universities Branch) and Director of Special Inquiries and Reports.

W. W. HORNELL, Assistant Director of Special Inquiries and Reports.

L. A. SELBY-BIGGE, Principal Assistant Secretary (Elementary Branch).

H. W. ORANGE, C.I.E., Chief Inspector for Elementary Schools.

E. R. EDWARDS, docteur ès lettres, H.M. Inspector for Secondary Schools.

A. E. TWENTYMAN, Librarian.

The CHAIRMAN: Gentlemen, the meeting which we have this afternoon is, of course, not one of the regular meetings of the Imperial Education Conference, which concluded its sittings yesterday, but perhaps you will allow me to state the circumstances under which I have invited you to this round table conference on the subject of bi-lingual education. One of the topics which had originally been suggested for discussion at the Imperial Education Conference had been bi-lingual education, but at the time when that was suggested we were informed by one of the Dominion Governments, through the Colonial Office and through the High Commissioner, that bi-lingualism was a topic not only of educational, but, at that moment, also of political interest. It was considered advisable by the Governments concerned to leave the topic out of those which were to come under discussion at the Education Conference. Now, I am delighted to say, the topic has ceased to be one of political concern, and Dr. Viljoen will be able to tell us very soon that whatever controversy there may have been on political lines in South Africa on the subject of bi-lingualism has now happily been settled by a unanimous report of the Select Committee which was sitting on the subject until a few weeks ago and since the Agenda of this Conference was first prepared. I felt, therefore, that under these happy circumstances it would have been a pity if those of the delegates who are directly interested in bi-lingual education had separated without being able to exchange views on that intensely interesting subject around this table, and I, therefore, at very short notice convened the meeting which is now assembled. Those who are here this afternoon are interested in varying degrees in this subject. To begin with, on the list of delegates you will find there are six or seven representatives of India; but everyone who knows India knows also that the topic of bi-lingualism in India is quite different in its educational aspects from what it is in South Africa, in Canada, and in the United Kingdom itself. In South Africa and in Canada and in the United Kingdom the two languages are two European languages. In India it is a question of a European and an

Oriental language, and the difficulty in India is entirely different from anything—I speak with great deference in the presence of the representatives of India—but the difficulty in India is entirely different from what it is in any of the Dominions or at home, and, therefore, to a certain extent, India is not interested in the same way as we are, in dealing with bi-lingual education. Here, this afternoon, I think, without saying anything at all disrespectful to the Indian delegates, the most interesting side of this subject for us is to be found in those places where you have two European languages. I have only mentioned one or two portions of the Empire that are keenly interested in bi-lingual education; Canada, particularly in the Province of Quebec, the whole of South Africa, the Channel Islands to some extent, Ireland and Wales, and to a certain extent Scotland, are also interested, and in Malta the difficulty is one which Dr. Enrico Magro, I believe, has constantly to deal with. It is with the idea not only of discussing our difficulties, but of reaping what advantage we can from the experience of others, that I have asked you to join in this discussion this afternoon. Might I suggest that the subject divides itself under a number of heads. First of all, of course, one wants to know what are the language conditions of the home. Is more than one language spoken in the home? That is one of the things that must of necessity affect the work that is to be done in the school. Then when more than one language is spoken in the home are the two languages of equal importance as regards the after school career of the child, and how much of the other language has been learned before the school age? That is really, I think, defining the area of the work that is to be undertaken before you get into the schools. Now a point which troubles us at home, as indeed it must trouble other people in other parts of the Empire, is this: What number of years are you going to make available for such instruction in each type of school, and what amount of time in each year? I presume we should all have to decide these two points each according to our own local circumstances. If you can throw any light on this this afternoon we shall be grateful. There is another very important side of the subject, viz., the staff, who are the teachers, what are their qualifications; what means are available for helping teachers to cope with these special problems, and how far are the teachers themselves naturally bi-lingual, or is their bi-lingual capacity merely a sort of academic addition to their natural home life? And then last of all the very important matter of text-books and material. I venture to suggest that on these practical topics there is a very great area for discussion and advice and exchange of experience, and I invite you to give us the benefit of your experience if you will. I propose that such discussion as we have this afternoon should be purely on the educational aspects of the subject and not at all on the political aspects of the subject. As educationists we here this afternoon have nothing whatever to do with politics. I would also suggest that our discussion should be of an informal nature. I think it might be of advantage if for the purpose of opening the discussion one of the South African delegates, Dr. Muir or Dr. Viljoen, would inform us of their experience and the views which they hold on the various educational aspects of this subject. Dr. Viljoen has spoken to me in private on the subject already and I know how deeply interested he is, and Dr. Muir also, in the developments which are likely to take place in the educational world in South Africa as the result of recent decisions.

Dr. MUIR: It was from South Africa that the suggestion was made that this should be a subject of discussion, and we had no desire whatever to involve any member of the Conference in a political discussion—

very far from it. As a matter of fact what I had in my mind was the similar treatment of the subject four years ago. Four years ago we had a Committee on bi-lingualism forming part of the Conference, and at that Committee all we did was to proceed round the table and get each delegate to give his experience of the treatment of bi-lingualism in certain provinces. What I had hoped for on the present occasion was a continuance and development of that. But in the last fortnight or so the question has been in a manner solved so far as South Africa is concerned, and we are in the happy position of not requiring the aid that otherwise we might have wished for. We are in hopes that when we return to South Africa we shall find that the Select Committee have presented their report; and that all that will be wanted will be for the four provinces of the Union to take the question into consideration and pass such ordinances as to them may seem fit in order to put the matter into practical effect. In these circumstances, therefore, I do not feel inclined to detain the meeting at all with any details in regard to our problem in South Africa. It is an immense subject, and supposing this arrangement had not been come to, it would have taken an immense length of time to make clear to everybody here how complicated our question was. If there should be any need to go into this matter from a purely educational point of view, I can commend Dr. Viljoen's knowledge of the subject thoroughly to you.

Dr. VILJOEN: The question of bi-lingual teaching, more especially in the Free State Schools, was brought very prominently before the public during the recent election campaign. Unfortunately for those of us who are connected with the administration and interested in the cause and progress of education, this subject was then dragged into the mire of party politics; and was made a plank in the political platform of the contesting parties.

As has been stated, there is reason to believe that this question has now been happily solved, not only for one particular province but for the whole of the Union of South Africa, which Dr. Muir and I have the honour to represent on this occasion. I shall endeavour to deal briefly with the history and the terms of this settlement.

Shortly after the meeting of the first Union Parliament, a Select Committee was appointed to examine the educational systems of the four provinces of South Africa, with a view to ascertaining—

“(1) Whether they are in harmony with Article 137 of the South Africa Act.”

“(2) Whether they involve any compulsion in respect of the teaching or use as a medium of either the English or the Dutch Language; and, in case in any particular they are not in harmony with Article 137 of the said Act or do involve compulsion in regard to language, to make recommendations as to the best means of bringing them into harmony with the principles enunciated in Article 137 of the said Act; due regard being had to the rights assigned to the Provincial Authorities under the South Africa Act.”

Both parties were evenly represented on the Select Committee that was appointed in November of last year.

The committee went most carefully into the various aspects of the question drawing up a comparative statement showing exactly the state of conditions existing at the time throughout South Africa, and how the four provinces of the Union compared with each other in respect to the treatment in the public schools of the two official languages both as subjects and as media of instruction.

I should have liked Dr. Muir to have told us something of the condition of things obtaining at the Cape, as that would have given me an opportunity of explaining to you the state of matters in that part of the Union with which I am more especially concerned, but under the circumstances it might seem somewhat presumptuous on my part to volunteer any information which may not be desired. Should the Conference, however, desire information on any points bearing on the subject under discussion with regard to any particular province of the Union, I am sure that Dr. Muir and I will be prepared to give you the desired information if we can.

But, to revert to the recently arrived at settlement, I am thankful to be able to tell you that the Select Committee has arrived at a settlement, the principles of which have been embodied in a report which has been adopted by the Union House of Assembly without a debate. If the settlement arrived at is approved, as I hope it will be, by the Provincial Councils, with which the question of primary and secondary education rests for the time being, we shall, I hope, be placed in a position to deal further with this most delicate and thorny question as departments of education, without being in any way hampered or affected by political considerations, on its purely educational value and importance.

Let us now consider the terms of the settlement.

The report of the Select Committee, after giving a brief review of the systems at present obtaining in the four provinces, contains the following general recommendations :—

1. That in the case of children in the sub-standards and elementary standards up to and including the IVth, the rule shall be instruction in and through the home language, but parents may claim that their children shall have instruction in the non-home language as a subject and also that the non-home language shall be gradually introduced and thereafter regularly used as a second medium in accordance with the intelligence of the child.

2. That above Standard IV provision shall be made for instruction in both languages, so that parents may choose either language as a subject and one or other as the sole medium of instruction, or the parents may choose that the child shall be instructed in both languages and through both as media. But where no choice is exercised by the parent the child shall be instructed in and through the language best known and understood by him, and as far as practicable the second language shall be taught as a subject and used as a medium.

In other words up to and including Standard IV—at which a line of demarcation is clearly drawn—every child shall receive his instruction if the parents so desire, as the majority of English-speaking doubtless will, exclusively through the medium of his home language, but if the parents wish it, as, I am sure, the majority of Dutch-speaking parents at present will, the second language shall be gradually resorted to and used as an auxiliary medium, the object, of course, being to acquaint the child's ear with the sounds peculiar to the second language as early as possible, and also to impart to him a knowledge of the more simple idioms of that language.

The second general recommendation is that above Standard IV equal provision shall be made for the use of both languages, both as subjects and as media of instruction.

Now, in order to meet any administrative difficulties which might arise in giving effect to the general resolutions, the Committee, after

consultation with the heads of the Education Departments of the Provinces, further recommended as follows :—

1. Where in any standard or group of standards a majority of the children have to be instructed exclusively through one language as medium and a minority exclusively through the other, arrangements shall be made for the efficient instruction of the minority :—

- (a) By means of parallel classes, where the existing organisation of the school permits, and in any case where the minority in one standard or in a group of standards is not less than fifteen ;
- (b) In cases not provided for under (a), by means of teachers qualified to teach in both languages.

2. In order to deal with children above Standard IV the schools should be so organised as to provide for those in which—

- (a) English is the prevailing medium,
- (b) Dutch is the prevailing medium,
- (c) English is the medium in certain subjects and Dutch in certain other subjects,

due regard being had in all cases to the medium used up to Standard IV.

3. Where in any school a minority of children have to be instructed through the medium which is not the medium of the school and where no school is available for them in which such medium is the school medium, provision shall be made for their instruction :—

- (a) by means of parallel classes, where the existing organisation of the school permits, and in any case where the minority in one standard or in a group of standards is not less than ten ;
- (b) in cases not provided for under (a) by means of teachers qualified to teach in both.

4. In schools classified under (c) the decision as to the number of subjects to be taught through the medium of English and the number to be taught through the medium of Dutch, and the selection of such subjects, shall be made by the Local School Authorities, subject to the approval of the Education Department concerned, and in the absence of any local authority by the Education Department, due regard being had to the wishes of the parents, which shall, if possible, be met, provided this involves no sacrifice of general educational efficiency.

A DELEGATE : May I interrupt to ask a question ? Would the educational policy of the Government be to promote a proportion of bi-lingual teachers for this purpose so that the instruction in Dutch and in English might always, if desirable, be able to be given by the same teacher ?

Dr. VILJOEN : The plan proposed would secure to all parents the right to have English as a subject and as a medium of instruction in the education of their children ; and the same as regards Dutch. It would meet the wishes both of parents who prefer that their children should be taught exclusively in or through one language, and of those who desire their children to be taught in or through both ; and under it there would be ample scope both for uni-lingual and for bi-lingual teachers. Dealing with the question of the position of existing and the training of future teachers, the Committee recognised that, in determining the character of any educational system, the quality of the teachers is at least as decisive a factor as the law itself. They therefore instructed the four Directors of Education to advise them as to the

best methods of training teachers with a view to securing an adequate supply of qualified teachers, and in regard to the courses for the training and examinations of teachers recommended that :—

1. Both the English and Dutch languages shall be included in the course of instruction for all teachers' general certificates and likewise included in the subjects of examination for such certificates, except in the case of the highest certificate, where the examination is of a purely professional character.
2. In these examinations there shall be a higher and a lower test both oral and written, in each language.
3. As far as possible the two higher tests shall be of the same standard and the two lower of the same standard, corresponding tests carrying the same number of marks.
4. A candidate must pass the higher test in one or other language, must obtain 40 per cent. of the aggregate maximum of marks, and not less than 20 per cent. of the marks obtainable in any subject, if such marks are to count towards the aggregate minimum required for a pass.
5. The candidate shall have freedom of choice with regard to the medium of examination.
6. The subjects in which the candidate passes and, in the case of English and Dutch, the grade (higher or lower) obtained, shall be endorsed on the certificate.
7. Where such provisions are not already operative due notice of their introduction shall be given, and they shall not apply to candidates who have already entered on a course of training.

And in regard to existing teachers the Committee recommended that:—

1. No English-speaking teacher shall be penalised on account of a lack of knowledge of Dutch and no Dutch-speaking teacher shall be penalised on account of a lack of knowledge of English, provided he is fulfilling satisfactorily the duties for which he was appointed.
2. That special facilities be offered to uni-lingual teachers to become qualified in both languages.

You will notice therefore that the object of the Select Committee and of the Union Parliament in dealing with this question was to remove the element of compulsion in any shape or form. The only compulsion left is that the early instruction of every child throughout the Union of South Africa shall, as far as possible, be given solely or mainly through the language best known and understood by the child. For the rest equal facilities are provided for the use of both languages as media and for instruction in them as subjects. We are hopeful that the settlement arrived at by Parliament will be in the interests of the nation, extinguishing controversies which have embittered the past and establishing equality on the foundation of the tolerant and comprehensive spirit which brought about the Union of South Africa.

Mr. Chairman, I think I have said enough now. You asked me to say a few words; I am sure I have more than complied with your request, and I am very glad to have had an opportunity of doing so, and of being present at this most important Conference, representing another aspect of our Imperial educational life, which, to my mind, I need scarcely add, is not only most important, but also most attractive.

Mr. DAVIES : In a case where two languages are spoken in the home, who determines which is the home language ; has the parent the choice ?

Dr. VILJOEN : The parent has the choice, yes.

Sir ROBERT MORANT : And is it the father or the mother ?

Dr. VILJOEN : The Departmental Regulations will provide how the parental choice will be exercised ; we shall henceforth be working under new conditions, but hitherto we have found where that question has arisen that it has settled itself without difficulty.

Sir HERBERT RISLEY : When you get these two languages going in the home circle do you find a tendency to mix the languages ?

Dr. VILJOEN : Yes, especially in those cases in which the early instruction of the child was not given through the medium of the child's own language. The tendency is, all through South Africa, to mix up the two languages, but I find that invariably to be the case with those pupils who have received their early instruction through the medium of the language which is foreign to them.

Sir HERBERT RISLEY ; I was asking, Sir, because we get curious illustrations of that in India. Where both Bengali and English are current in the home circle you get singular mixtures.

Dr. MACKAY : Might I just say a few words now for Nova Scotia and New Brunswick. In Nova Scotia less than 10 per cent. are Acadian French. In New Brunswick perhaps less than 20 per cent. are Acadian French. For a number of years we endeavoured to give them at least in the common school grades bi-lingual readers with instruction from the beginning in English. It was held by the French that the children could make no progress because they could not understand English when first entering school. In order to settle the difficulty a commission was appointed ; and the commission determined, and the Government accepted the determination, that the education of the French-speaking child should commence, and be continued during the first four years in the mother tongue, and French readers were provided for them. While these French readers were used during the first four years the teachers of these schools were expected to acquaint themselves with the method of teaching English colloquially, and during these four years the children were required to do as much as possible in English so that after the fourth year instruction could go on in English continuously. That is the way the matter stands at present in the Provinces of Nova Scotia and New Brunswick. I believe the French are pretty well satisfied with it. The children in this way learn English more easily. They can learn written French more rapidly, and that enables them with very little difficulty, to commence their studies in English thereafter.

Sir ROBERT MORANT : Have you a large supply of bi-lingual teachers ?

Dr. MACKAY : We are now beginning to have a sufficient supply of bi-lingual teachers of Acadian origin. We have a vacation of two months in July and August. At the provincial Normal College in Truro, which is affiliated with the agricultural college, we give during this vacation a course in nature study and also in physical training, but we have one department which we call the bi-lingual school. We have a French visitor of schools, not a regular inspector. We call him a visitor because the regular inspectors take charge of both English

and French schools, while the visitor assists the inspectors in the French schools. The present visitor of the Canadian school teaches in the bi-lingual school, during the vacation, and the Government helps parents to send a sufficient number of scholars from these French schools to Truro for the course of five or six weeks, and there they are taught English by the instructor. Acadian French teachers are present and they do practical work there in observing the instruction and making an effort themselves to do the same. These teachers when they go to the French schools after this colloquial instruction, prepare the French children to continue their studies, after a four years' course in English.

The CHAIRMAN : Dr. Parmelee, does that very much cover the lines on which you work in Quebec ?

Dr. PARMELEE : It does not exactly cover the lines. The remarks which have been made have not been entirely in harmony with the experience in Quebec. In the first place, we are quite agreed that it is impossible to expect to educate children in both languages at the same time, beginning when they first go to school. There is absolutely no doubt about that psychologically. And our experience abundantly proves that we must at first give instruction in the mother tongue. I admit that if the object were merely to teach the English language without any regard particularly to the quality of the education imparted, I should say make them begin to study English as soon as you can, saturate them with it thoroughly. But when you remember that the school life of the child ends at 10, 12 or 14 years of age the time is not long enough. When you take the child at 6 years of age the time is not long enough if we are to handicap him for the first two or three years by attempting two things :—teaching a language not his own and letting him understand through that very imperfect medium such things as we wish to teach him.

I thought the other day when something was said about the difficulties, that the reference was to the Province of Ontario. In certain parts of Ontario where there are a good many French people, the parents are anxious that their children shall learn English not for immediate practical purposes, but because if they go away they will probably go among English-speaking people ; and bi-lingual schools were accordingly established. It was shown in these schools that the plan of using both languages as media of instruction from an early age was not satisfactory.

We are quite settled upon that, but we are not at all in accord with all that Dr. Viljoen said in regard to the qualifications of the teachers. We have had in the Province of Quebec as good an opportunity, I think, as anybody has had, of having bi-lingual English teachers and our interest in having them has been very great, and we made large sacrifices in our courses of study in our normal schools and training colleges for the purpose of having all teachers who go out reasonably qualified to teach both languages. We have not succeeded ; they cannot do it. Do you yourself know any ordinary well educated Frenchman who speaks English with very good facility ? Do you know any such man to whom you would entrust your children for the purpose of instruction in the English language ? You would not do it. Now the child starts in the school at five or six years of age with a comparatively small vocabulary, and he is beginning to extend his vocabulary from books and he learns the sounds of the new words from the teacher who gives him the pronunciation, which is of course a very singular thing in the English language.

We have constantly found, that if children are taught English by teachers whose mother tongue is French, they will be taught to speak it with French accent and pronunciation. The teachers hold certificates from us of being able to speak English and to teach it : but it is almost impossible for them really to do it. I do not know what the experience may be in regard to the Dutch. I do not know the difficulties or facility with which Dutch people learn English or how easy the Dutch language is to learn, but with regard to French it is practically impossible to get a bi-lingual teacher to teach a language which is not his own to children whose mother tongue that language is. However, in the schools where we have only one teacher we must do the best we can under the circumstances. But we have discovered this ; that in our native schools of which we have a good many in the Province of Quebec we have teachers of various aptitudes in regard to the teaching of languages and we have teachers who have had quite different opportunities to learn a language in their youth, although they have taken the same course of instruction in the normal schools. In the city of Montreal they have introduced the specialist, and they have produced very good results because they have chosen from among their teachers those who have special opportunities and know how to speak French and speak it well, and these English-speaking teachers teach French to English-speaking pupils. That is not inconsistent with what I said, that we would not dare to allow them to teach French with all the intricacies of a language which they did not know to French pupils. But they do teach French to the English pupils better than the French teacher.

Now, so much are we impressed with this that we are offering this year for the first time comparatively large bonuses to the school boards with bi-lingual schools who will employ specialists in French to be responsible for all the French teaching throughout all the grades. Formerly in many of our good schools nearly every class teacher was responsible for the French in his own class, and we were getting unsatisfactory results, results that did not compare in any way at all with the results they were obtaining in the city of Montreal where the other system prevailed and has prevailed for many years. Therefore we have said we will give at least £20 towards the salary of every teacher who is a qualified specialist if you will encourage him or her to take charge of the French teaching. Further we will pay the expenses of a certain number, say 30 or 40 for the first year, of these teachers in order to go to Montreal and take the very valuable course at the University which extends over six weeks. We will pay practically all the expenses and fees for these special teachers whom we shall choose who will go there to take that course. It is not designed for people who do not know French ; it is designed for those who already have a knowledge of French. It really provides an opportunity of being saturated by French atmosphere, French language, French habits for those six weeks.

To sum up :—In the first place we consider that the instruction must be in the first instance in the mother tongue ; the change to a second language comes at a later time. Next, we must have our special teachers excepting in these cases where we cannot arrange for them. And then I might add in the third place—it is a question which has already been discussed, I will only mention it—that the experience in Montreal is in favour of phonetics. The teachers are quite convinced they get far better results, and get results far more readily when they base their teaching in French on a study of phonetics. They deserve all sorts of praise in the province of Quebec and they have elevated in Montreal and Quebec in our bi-lingual schools the teaching of French to a highly satisfactory and respectable plane.

I do not know of anything further to say in regard to it excepting this, that it is very hard to attain real bi-lingualism. I am not one of those who think it is a waste of time to learn a language, but language, after all, is only a medium for the communication of thought, and, after all, it is nothing but a matter of practice, a matter of imitation, and if I must have three or four symbols to express one thought in my mind I cannot believe at all, though I am an advocate of bi-lingualism in the Province of Quebec, that it is an advantage. We cannot expect bi-lingualism in the sense that one man may be equally proficient in the two languages, but we need a good working knowledge of the other language. I think that is all that can be expected.

Mr. OWEN EDWARDS : I think I can say something pretty much on the lines already indicated by the previous speakers. We have about a million Welsh-speaking people, over one-fourth of whom return Welsh as the only language they can speak.

We have many advantages in Wales for solving the problems of bilingualism. In the first place, the language problem is not connected, and never has been connected, with either political or religious party questions. In the second place, the two languages of our country have each a literature well adapted for the teacher's purposes. I am not quite sure that, of the two, Welsh is not the more useful language from a teacher's point of view : it has a very simple alphabet ; with the exception that each vowel is long and short, there is only one letter in the alphabet that signifies more than one sound ; its orthography is so simple that it may almost be called phonetic ; its literature is well adapted for school use, as its chief modern production is the lyric, the fairy tale, and the novel ; and, so far, it has comparatively few of those annotated texts which tempt a teacher to avoid the trouble of searching for suitable material in the real living literature. We have a third advantage which, Mr. Chairman, you know well. The Board of Education have not interfered with bi-lingual problems in Wales. The managers of schools and Local Education Authorities have been allowed to work out their own salvation in their own way ; and the regulations of the Board are practically a statement of their practice. At present, almost every Local Education Authority in Wales has a scheme of its own for teaching Welsh ; where there is no scheme, the choice of means is left to the teachers.

We have three simple problems. The first is to teach English to a Welsh-speaking child, the second is to teach English and Welsh to bilingual children, and the third is to teach Welsh to English-speaking children. With regard to the teaching of English to Welsh-speaking children, for a certain number of years we tried the method that seems to be condemned unanimously by the Conference to-day. We thought that the best way of teaching English to a Welsh child would be to make language and the atmosphere of the school entirely English, and to use Welsh, if at all, for the purpose of absolutely necessary explanation. I can but state the result by quoting from a report of a small committee of teachers of great ability and long experience, a report adopted and published by the Anglesey Education Committee. The infant, as he leaves the infant school, is thus described,—

“He reads words with which he associates no meaning, and is denied access to the written word which would at once call up ideas and stimulate his intelligence. Thus, when he has attained

the age of six or seven, his book tells him nothing ; the language he reads he cannot understand, and the language he understands he cannot read."

That was the typical product of our infant schools until a few years ago. As regards the bi-lingual districts, we have to face, in our smaller schools, the difficulty of a double curriculum and a double staff. We avoid both. If about 66 per cent. of the children speak English as their home language, we take English as the language of the infant school ; if about 66 per cent. speak Welsh, we take Welsh as the one language. So far, we have had no difficulty that has not been easily overcome. Bi-lingual teachers are easily obtainable.

The teaching of Welsh to English children offers no difficulty. Sometimes the Welsh teachers are visiting specialist teachers ; but it is much more satisfactory to have the second language taught by the regular staff of the school.

Our experience of failure and success has caused us to arrive at two very definite results. They have been referred to already. In the first place, an infant can only be taught through the medium of his home language. We have tried both ways. And secondly, no infant can be taught to read and write two languages at the same time. We have tried that, too ; and we find that if you try to teach an infant to read or write more than one language at the same time, he gets out of every difficulty by attaching no meaning to the words in the one language or the other.

Dr. VILJOEN : Might I ask what is meant by an infant ?

Mr. OWEN EDWARDS : By an infant I mean, say, a child under seven.

In Welsh-speaking districts, as far as reading and writing are concerned, Welsh is always the only language in the infant school, often the only language in Standard I. (children of seven), and sometimes the only language in Standard II. (children of eight). But a little oral English, as a rule about two lessons a week, is introduced from the first ; gradually this oral lesson becomes more frequent, until, when the child is about seven, a lesson is given every day. In Standard I. or Standard II. English reading and English writing are introduced, and the child immediately applies to them the principles he has learnt in learning to read and write his own language. As he goes up the school he will get more and more English ; when he leaves school, he speaks and reads and writes the two languages with almost equal ease. In English-speaking districts, English is taught as the home language, and Welsh is gradually introduced as the second language. In bi-lingual districts more time is given in the infant classes to the teaching of the second language orally.

The results, so far as we in Wales are concerned, are certainly unmis-
 takable. In the Welsh-speaking districts, it is not too much to say that the
 newer method of teaching by means of the home language has practically
 doubled the efficiency of the schools. For one thing, it connects the
 elementary school with the home and with other educational institutions,
 especially with two characteristic Welsh institutions : the Sunday School
 (which is a school for the whole people, not for children only), and the
 Literary Meeting. It has also greatly facilitated the learning of English.
 A child in Standard III. in a school employing the modern method
 writes English more correctly and reads it more intelligently than a
 child in Standard V. in a school in which the old method is still used.
 That is, a Welsh-speaking child of nine, who has learnt his own language
 first, will write better English and read English more intelligently than a
 Welsh-speaking child of 11 who has been taught English exclusively
 from the first day he entered school. That is my experience.

I ought to say something about the effect of the teaching of Welsh as a second language in the English-speaking parts of Wales. There are at least two results. In the first place, it has introduced greater variety to the life of the scholars, greater vivacity to the teaching, and brought greater interest to the minds of the children. In one of our populous and newest towns, the site of which I remember quite well as green fields, Welsh was taught in the elementary schools to the children of people of all nationalities who flocked to the new and busy port. Then doubts arose as to whether the schools gave a sufficiently thorough education in subjects that are regarded as essential; the children were asked to spell words which they will never use, and to labour out arithmetical problems they will never be called upon to solve in life. An attempt was made to drop all subjects regarded as ornamental, including the second language. But, though not one-tenth of the population was Welsh, the teaching of a second language has made the schools so much more efficient, and the life of the school so much more interesting to the children, that a great majority of the parents demanded the continuation of the teaching of Welsh. The other result of teaching a second language is the more efficient teaching of English, more conscious attention is paid to the home language, and the necessity for correct expression in it is the more easily realised. The teaching of English to Welsh children is not difficult; these children have the great advantage of not having to begin with bad English. A much greater difficulty is the teaching of good English in the industrial English-speaking parts, where many languages and many dialects of English meet. The teaching of a second language—and, in an elementary school, Welsh is the only language practicable—introduces a conscious attempt at right expression quite low down in the school. At the top of the best schools it develops into something like an appreciation of the beauty of English as a language. Even where the child discontinues the study of Welsh before leaving school, or soon afterwards, it is the experience of teachers that the learning of it has had an excellent effect, not only on the development of intelligence, but on the acquisition of good English.

4 11 We do not regard the bi-lingualism of our country as a disadvantage in any way. We look upon it as an advantage. I believe that every schoolmaster in Wales who has given his mind to the subject looks upon bi-lingualism now as his opportunity, and not as his difficulty. He sees that, whatever advantage a child may have in a more expensive system of education by the learning of Latin or Greek or French or German, every elementary school child in Wales can have by learning his second language, be it English or Welsh.

Our problems are exceedingly simple; the right methods of teaching two languages are fairly apparent; and, especially with regard to language teaching, there is a tone of hope and happiness throughout our elementary schools.

Mr. A. T. DAVIES: Perhaps it would be convenient if I supplemented what Mr. Owen Edwards has said by a further word or two in regard to Welsh. Up to 1907, Wales was not given a definite place in any Code of Regulations of the Board of Education. I remember very well, when I came to this office four years ago, hunting about for any reference to Welsh in the Code. I could not find it anywhere, and was at a loss to understand how the language had ever come to be officially recognised in the schools. But I ought to guard against an erroneous idea which might spring from that fact respecting the Board's attitude towards Welsh. So far back as 1893, the following instruction was

issued by the Board of Education to Her Majesty's Inspectors acting in Wales :—

“In the case of Wales it is clearly established that in many cases in Welsh-speaking districts the use of Welsh in the school, side by side with English, will greatly facilitate an intelligent understanding of English. It is desirable that the attention of teachers should be called to this question, and that Her Majesty's Inspectors should encourage the practice of bi-lingual teaching by themselves making use of Welsh in testing children's intelligence. The use of Welsh songs and Welsh poetry in the schools in question will be of considerable service.”

That is rather an important point; the Inspectors are “themselves to make use of Welsh in testing the children's intelligence.” Of late the Board have gone considerable stages further, because up to 1907 the matter had not been placed on that proper basis which experience had by that time shown to be desirable. In that year the Code of Regulations for Public Elementary Schools in Wales was very carefully considered, and, at the President's suggestion, I will now read the regulations dealing with Welsh, which were then inserted for the first time, and which have ever since been in operation in Wales and Monmouthshire :—

“The curriculum should, as a rule, include the Welsh language.

“Any of the subjects of the curriculum may (where the local circumstances make it desirable) be taught in Welsh, but it is not necessary that the Welsh language should be taught in every school or in every class.

“Where Welsh is the mother tongue of the infants, that language should be the medium of instruction in the classes.

“Provision should also be made for the teaching in every school of Welsh history and the geography of Wales, and Welsh literature should also be included in the curriculum of higher elementary schools.”

The Regulations for Secondary Schools in Wales also have, since 1907, included the following requirement :—

“In districts where Welsh is spoken the language, or one of the languages, other than English should be Welsh. Any of the subjects of the curriculum may, where the local circumstances make it desirable, be taught partly or wholly in Welsh.”

In the case of Pupil-Teacher Centres in Wales a somewhat similar regulation is in force.

Immediately following upon the adoption and endorsement of these regulations the Board's Inspectors reported that their introduction (and, I should perhaps add, the insistence by the Board on a greater amount of attention being given to the subject) had resulted in arousing the attention and stimulating the interest of the scholars. H.M. Inspectors, without exception, reported—I have a sheaf of reports here that I could refer to if necessary—most favourably upon the beneficent operation of the new provisions. Here is one report, dated 1909 (or two years after their first issue), and taken at random. It may be regarded as typical of numbers of others :—

“The introduction of Welsh as the medium of instruction in the infant class has had a most beneficial effect on the whole school; the interest of the scholars is aroused from the beginning, and the older scholars bring to the study of other subjects an alert mind and not a mere memory.”

In regard to the Inspectors, it may interest the delegates to know that His Majesty's Inspectors in Wales, one and all, are required by the Board of Education to have a competent knowledge of the Welsh language. It is not a question of one Inspector having it and doing duty for the whole of Wales, but of all the members of the inspectorial staff in Wales to-day, and for many years past, knowing the two languages. As a sidelight on the extent to which Welsh prevails, I may say that I think the bulk of the correspondence of my colleague, Mr. Owen Edwards, including that with his colleagues on the inspectorate, is conducted in the Welsh language. I believe he writes more letters in Welsh than he does in English. That will convey to the minds of the delegates the idea to what extent Welsh is a living language to-day in the Principality.

One point more—as to administrative difficulties—and I have done. When these Articles were first inserted in the Code, I was fearful that they might produce a crop of difficulties. Anybody who is conversant with the bi-lingual question and with, for example, the difficulty arising from the inability of a teacher in a small school to teach in more than one language might fear that the administrative officer would have had a fairly bad time. So far, however, from that being the case, in the last four years during which those regulations have been in operation in those of the 1,800 odd schools in Wales to which they were applicable I have not had to deal with a single administrative difficulty. None has ever been brought to my attention nor sent to the Board for adjudication. I should perhaps qualify that by stating that I do recall the case of a station-master located in a remote part of a purely Welsh-speaking country, who complained to the Board that his child was rather lost in the school there. But the blame for that rested rather with the railway company, who inconsiderately sent a monoglot Englishman to a spot where the inhabitants spoke little or nothing but Welsh. I think, therefore, it is of interest to know that no difficulty has in fact arisen in Wales as the result of the Board's system of dealing with the bi-lingual problem. Such difficulties as we have had to contend with have arisen rather from the lack sometimes of a sufficient number of teachers with a thoroughly competent knowledge of the language.

MR. WARRE CORNISH: Mr. Chairman, I do not know if the meeting would care to hear something about the condition of things that exists in Scotland as regards this question. What I have to say can be stated in a few words because in Scotland, though there is a considerable area of country in which the language of the children—the home language—is not English, the Department take—so far as the regulations and anything which is obvious to the outsider show—no account of the question. That is to say, if you look in our code you will find the usual provisions about curriculum, what is to be taught to the infant part of the school, the junior division, the senior division, and so on, all the subjects, at what point they are to be introduced, but there is not a word about Gaelic. But it must not be thought from this that the interests of Gaelic-speaking children are ignored. The Department refrain from laying down the law as to the bi-lingual problem; only they are careful that in the Gaelic-speaking districts there shall be an Inspector, generally a Highlander, who thoroughly understands the difficulties of the problem, and who is in very close touch with the teachers, and it is left very much between the two parties; and I can only say that, so far as I am aware, this method of leaving the problem to settle itself on the spot has worked with very general satisfaction to the parents.

Of course there are enthusiasts for the Gaelic language and extremists who may make their voice heard sometimes, but there has been very little complaint from the parents that that language is not receiving sufficient attention.

Dr. VILJOEN : Is it used as a medium in any way?

Mr. WARRE CORNISH : There is no provision for or against the use of Gaelic as a medium.

The CHAIRMAN : It is occasionally used as a medium in some schools, is it not?

Mr. WARRE CORNISH : It certainly is used as a medium. The Department offer a grant, a very small grant, £10 a year, to any school which employs a Gaelic-speaking teacher. The conditions on which this grant is paid are very simple. In the first place it is a condition that the schools where such teachers are employed shall be schools mainly attended by children whose home language is Gaelic. There is no question of introducing the language into districts where the Gaelic is not the natural language of the children. It sometimes happens that a Gaelic-speaking teacher finds himself in a district possibly near the border, and sees in this grant perhaps a chance of increasing his salary, and tries to arouse enthusiasm for the language by teaching it to children whose parents have not the slightest desire that they should receive such instruction. Well, in that sort of case it is ruled out.

Then the only other condition is that the teacher in question must be reported by His Majesty's Inspector to have made effective use of his knowledge of the language as an aid in instructing the Gaelic-speaking pupils in the various subjects taught, including English. You observe a wide discretion rests with the Inspector, and I think that is a very important point.

As regards the training of teachers, all that can be said is that ample facilities are given in the Gaelic-speaking districts to teachers to get access to the teaching profession, and the idea in giving these small grants to individual schools is to attract the teachers whose native language is Gaelic, and who have been to the training college and received the ordinary training of an English teacher; to draw them back to their own homes if possible. But I expect the general experience is that that is not a very easy thing to do; that really the problem in Scotland depends very much upon that; can you get the teacher who has started in some out-of-the-way part of Scotland, and who has just succeeded in getting to the training college—perhaps, getting a University degree—can you induce him to go back and teach the children, among whose parents he has been brought up himself, in their own language? I think it is found that the teacher who has started in this way has a very great advantage in his bi-lingual training, and teachers of this sort are generally ambitious people, and it has not, as a fact, been the most successful who have returned to their own country.

The only lesson that perhaps can be learned from Scotland in this matter is a lesson of a country in which the problem has been successfully left to settle itself on the spot. It is rather like the religious question which has exercised other countries so much. You leave it in Scotland; the School Board of each district is allowed to settle its own religious difficulty for itself, and the consequence is there is not very much to decide, and that is practically what happens in the Gaelic-speaking districts.

Sir HERBERT RISLEY : We are rather accustomed to think of ourselves in India as being *toto divisos orbe* in matters of education, but in listening to what has been said here I am struck with some points of resemblance, particularly as regards what Dr. Viljoen said as to the use of the home language. Now, Sir, I have here a resolution which was issued by Lord Curzon's Government in 1904, laying down the broad lines of educational policy in India. It was issued by the Government of India when my friend Mr. Orange was Director-General of Education, and when I myself was connected with educational administration as Secretary of the Home Department. In it there is a very short paragraph dealing with the question of language in schools, which I think may be of interest to the Conference :—

“As a general rule a child should not be allowed to learn English as a language until he has made some progress in the primary stages of instruction, and has received a thorough grounding in his mother tongue.”

That is very much what has been said about the home language here. Then comes an experience which will be familiar to you :

“It is equally important that when the teaching of English has begun, it should not be prematurely employed as the medium of instruction in other subjects. Much of the practice, too prevalent in Indian schools, of committing to memory ill-understood phrases and extracts from text-books or notes, may be traced to the scholars having received instruction through the medium of English before their knowledge of the language was sufficient to enable them to understand what they were taught. The line of division between the use of the vernacular and of English as a medium of instruction should, broadly speaking, be drawn at a minimum age of 13.”

That is older, I think, than your Fourth Standard ?

Dr. MUIR : Much older.

Sir HERBERT RISLEY : Then it goes on—this is important :

“No scholar in a secondary school should even then be allowed to abandon the study of his vernacular which should be kept up until the end of the school course. If the educated classes neglect the cultivation of their own languages, these will assuredly sink to the level of mere colloquial dialects, possessing no literature worthy of the name.”

Those are the principles which govern the question, govern I should say, the most general aspect of the problem in India as regards the relations between English and the various vernaculars.

Now, if you turn to the bi-lingual question as between vernacular and vernacular, I can only speak about Northern India, and there is a very fair complication there. For example, you have in the United Provinces, a province with about 50,000,000 of people, two languages, one of which is called Urdu and the other which is called Hindi. Now, the grammatical structure, the mere machinery of the two languages, is identical, but the vocabulary differs. The tendency—it is only a tendency—is for the vocabulary of Urdu to be drawn from Mahomedan sources, Arabic and Persian ; the tendency again is for Hindi to be drawn from Sanskrit, or the Prakrits, the various derivatives of Sanskrit. An illustration would be something like this ; let us suppose that two people are concerned in writing a book, and they are considering about the preface, and one of them says—What sort of preface shall we have ? The Mahomedan might probably use for the word “ preface ” a word of

Arabic derivation, and the Hindu would go back to the Sanskrit; but otherwise they would both express the sentence in the same words. The Hindu would go back to the Sanskrit just in the same way as you find William Morris and his followers writing "foreword" instead of "preface."

One of these languages, Urdu, is written from right to left in the Arabic or Persian characters, whichever you choose to call it; the other, Hindi, from left to right in the old Sanskrit fashion.

Moreover, political interests are involved, because the use of Urdu rather than Hindi, and still more the use of the script which is connected with Urdu, is a very burning question between Hindus and Mahomedans in the United Provinces. When you travel up to the Punjab you find exactly the same feeling, and the same sort of questions arising as between Urdu and Punjabi. Punjabi has a structure and vocabulary of its own, still further removed from Urdu than Hindi is. It also has a separate character of an extremely curious kind to which those who speak Punjabi are very much attached. It is called Gurmukhi, and is said to have been invented by a man who was a rope-maker, who evolved the letters by twisting bits of rope. If you look at a page of Gurmukhi writing it is exactly as if somebody had taken a number of bits of string and curled them up into such figures as could be made in that way. Similar questions arise in Orissa and Assam, and I have no doubt some of my Indian colleagues will tell you about Bombay and Southern India. I have said enough to give you a general idea of the kind of questions as between the vernaculars, but the really important problem is the relation between English and the vernacular, and that has been settled by the resolution which I quoted exactly on the lines that I have described to-day.

Mr. ORANGE: May I add one word: it struck me while listening to Dr. Viljoen and also to Dr. MacKay, that they had not laid any emphasis on what we found it necessary to lay a great deal of emphasis on, that is the distinction between teaching a second language and using it as the medium of instruction. As I listened to the account of the Concordat for South Africa, I understood that a child was to be taught its mother tongue in its own language for the first four years of its school life, and might then learn through the medium of a second. In India, if the child learned English we should never allow English to be used as the medium of instruction in the fifth, and probably not in the sixth year of school life; it would not be until the seventh or more probably the eighth. I did not gather whether in Africa or Canada any importance was attached to that distinction. In listening to Dr. Viljoen I thought they were going to slide from the one into the other, beginning to teach the second language and using it as a medium of instruction at the same time.

Dr. VILJOEN: I may say, Mr. Chairman, that in the Free State after Standard III. every child must learn both English and Dutch as languages, as subjects, unless exempted from one or the other by the Board of Education at the request of the parent. I spoke more especially of the use of the home language as a medium of instruction up to Standard IV., but both languages are taught, and in Standard III. every child is expected to be taught both languages unless the parents especially ask that they may be exempted from the second language.

Mr. ORANGE: There is one year interval, and after that it may be used as the medium?

Dr. VILJOEN: Yes, after Standard IV.

Mr. W. G. WEDDERSPOON : The discussion so far has been most interesting and has suggested one or two points to me. Sir Herbert Risley has read out the principle which governs the distinction between the two languages in India. The principle is a general one, it leaves room for a considerable amount of variation in application. About seven or eight years ago in Burma we had the principle, in schools where two languages were taught, of beginning the two languages from Standard I. That was a very bad system ; and as the result of this the general orders issued by Lord Curzon we introduced into Burma the system which provides for a training in Burmese, in arithmetic and geography up to and including Standard IV., before a boy is allowed to take English at all. There were several reasons for that, and I think the psychological one was a very strong one. But the result of the old system had been disastrous in this way, that it had led the people to expect English from the beginning, and they very strongly objected to the excision of English in the lower standards, and as a result we attempted a compromise. The missionaries were particularly anxious that we should not omit English. Their particular reason for that they did not state, and I do not offer any opinion as to that, but the fact remains that they were anxious and the people were behind them, and the compromise was very much what Dr. MacKay spoke of in Nova Scotia. We permitted the oral teaching of English in the standards below the 4th, that is to say any oral teaching that could be given. I may say the people were not satisfied with that. English, in India, you know, has a considerable market value, and the people want their children to have A.B.C. books and things like that. They are not satisfied with mere oral instruction. When we came to apply this compromise we found it exceedingly difficult. The question of teachers arose, the bi-lingual teacher. Most of our teachers are Burmans who have picked up a knowledge of English in their ordinary schools and have taken to teaching afterwards. Now their knowledge of English is nothing like that of an ordinary English teacher. The result was that the teaching of oral English, where it led to anything at all, led to the teaching of a kind of English which had largely to be unlearned because it was so bad.

I fear the bi-lingual question is going to be a very difficult one. The tendency of all education, so far as I have seen it in the Province I come from, is that one language is going to be predominant in the end, and it is impossible, so far as we see, to carry out the teaching of two languages on the same plans throughout the school. With us in India I think I am not wrong in saying that English tends more and more to predominate as you go higher up the school.

Regarding the question of the medium of instruction a good deal has been said about passing from the vernacular to the English. From practical experience, if I may express my own views, I think you will find that one year is by no means long enough for the transition to the use of the second language as the medium. Burmese children cannot, with a year's good instruction in English, intelligently learn any subject like geography, for example, through the medium of English. They will ultimately, no doubt, if they stay long enough in the school, but there is a very real break between vernacular teaching and the attempt to use the second language as the medium of instruction. It is a much greater break than you can imagine unless you have seen the actual results of it in practice. Our 4th Standard is where we stop Burmese as a medium of instruction. I have had to allow my 5th and 6th Standards to continue the teaching of geography from the medium of Burmese, because if I did not do that it would mean retarding the progress of children.

If you are to have two languages in a school you will find you will have gradually to introduce the second. It is not possible to pass from one to the other as a medium of instruction so promptly as one might imagine, and my experience is that English gradually ousts the vernacular as a medium of instruction as you go up the school, but the whole process is gradual. That is where the bi-lingual teacher comes in. Someone has said a good bi-lingual teacher is not possible. That I daresay, taken as a general rule, is true. The native teacher with us rarely attains that command of English that enables one to describe him as a good bi-lingual teacher, but part of our population, the Eurasian population, can speak both languages pretty fluently, but with them one language tends to predominate.

The CHAIRMAN : I think it might be interesting to have some more Indian experience.

Mr. COVERNTON : I have not a very first-hand experience of vernacular school work in Bombay because my work has lain in colleges or amongst the European schools, but from such knowledge as I have obtained I am inclined to agree with a good deal that Mr. Wedderspoon has just said, especially with his point that the system in India tends to popularise the English education at the expense of the vernacular education. Now, on the Bombay side we have a system by which both are taught, first in the vernacular—pupils must at least pass satisfactorily through the first five standards in the vernacular before they can go on to the study of English, but at that point they are allowed a choice of either going on to English education or continuing their studies through the vernacular. Now, I believe more and more it is becoming the tendency for those pupils who do pursue their education to a more advanced stage to use the English language and not the vernacular, so that the number of pupils who proceed to, say, Standard VIII. in the vernacular, is tending to become fewer and fewer.

In Bombay I do not think we have a bi-lingual problem in anything like the sense it exists in South Africa and in Canada. I myself have never come across, for instance, any boy, or, at any rate very few, who from the time they began to speak could speak in two vernaculars at the same time; but there is an increasing number of those who from the very time they begin to speak employ a vernacular and English simultaneously. But, of course, these are confined to the great towns, and particularly to the town of Bombay. I once asked the son of a Chief Justice in Bombay what language he spoke as an infant, and he told me that he practically spoke the vernacular and English from the beginning. He began to speak in those simultaneously.

I came across one rather different question in the case of children who belong to the Konkan. That is a strip of country which lies between the sea and the western ghats. They are a people who speak a language which contains a very large element of Mahrathi, but is a very corrupt form of Mahrathi. It is a language, too, which I believe has no literature. Many of these people are Christians, and for that reason they naturally desire to obtain a Christian education where they can; therefore they seek education in the schools of missionaries, and especially the schools of the Roman Catholics. They come to these schools knowing no language but Konkani. It is quite impossible to get a teacher who knows any Konkani. The teachers that are available in these schools either speak English or possibly a little Hindustani. The code on which these schools work is intended for European scholars, so that all these children who speak Konkani have to attend schools working under a European code, the teachers of which speak only

English and possibly a little Hindustani. The difficulty of giving any instruction to these children from the beginning is enormous, and it has mainly to be effected through the medium of Hindustani, and that of course a very low kind of Hindustani ; but in a year or two they pick up enough English to make some real progress.

The CHAIRMAN : You have more than two languages in Malta, have you not, Professor Magro ?

Professor MAGRO : Three.

The CHAIRMAN ; Could you tell us anything of what you do ?

Prof. MAGRO : With pleasure, Mr. Chairman. I did not care to speak before, because all the members of this Conference have been speaking of their experience and I find a good many points of contact with the problem faced by the people in South Africa and in a way also in Wales. We have Maltese and Italian, which was the language of education until the reign of the Knights, but with the advent of the English in Malta naturally English was added to it, and therefore at this time we have to face the problem of three languages. Our own language, as I said lately to the Imperial Conference, is a Semitic language. The language has nothing whatever to do with any European language, although the inhabitants of Malta are of European descent.

Sir HERBERT RISLEY : It is Arabic, is it not ?

Prof. MAGRO : Well, some say it is Arabic and some say it is Phœnician, some say it is cognate.

Sir HERBERT RISLEY : I mean the vocabulary, apart from the structure.

Prof. MAGRO ; Partly Arabic, and the ancient literature from old Arabic. However, whatever it is it is Semitic ; oriental characters with many additions of English, French, and Italian in the vernacular. Now, without going through the history, I may say briefly that up to 1870 the English language was very much neglected and education was entirely carried on through Italian ; every subject of instruction was carried on through the medium of Italian ; and a hue and cry was raised at that time at the instance of some educationalists. A Royal Commission was appointed and the method was revolutionised. Instead of beginning with Italian and carrying it throughout, the instruction was all given in Maltese till the second year, and from the second year all in English. That was resented by a good many especially of the lower classes, and to a certain extent by the members of the Church as having a tendency to ostracise the Italian language from the Island, for the simple reason that the Italian was relegated to the higher standards, the fifth class. That would represent the 6th or 7th Standard of to-day. After some seven years' experience and warfare that system was abandoned in favour of simultaneous instruction, that is the giving of instruction in English and Italian from, I might say, the very beginning of the standards, from the 2nd Standard upwards. In these standards instruction had to be carried on in English and in Italian, besides Maltese. The results of the experiment were very disastrous because, as might be expected, children at that age were very liable to mix up the two languages. For example, if one were asked to say a "good boy" he would say "good" in Italian and "boy" in English, "buon boy," or reverse it, use the Italian as the noun and the English adjective. So after nine or ten years that system was abandoned, and on the recommendation of a special committee of educational experts the

Government introduced in 1898 the present system which is now extant this year. With that system the principle of choice was introduced. In the Government elementary schools, the treatment of the three languages is the following. In the infant schools the instruction is carried on through Maltese, but colloquial instruction in English or Italian, according to the choice made by the parents or guardian in writing, is allowed. It may be English or Italian, but practically this choice is exclusively in favour of English.

This present year the choice is represented by 97·7 in favour of English, and only ·3 in favour of Italian. It began with 81·4, then it went on to 86, 94, and 96, until in the present year it is 97·7 in favour of English colloquial instruction. Then after the infant stage comes the elementary stage. In the first two standards instruction again is carried on through Maltese; when he comes to the 3rd Standard the boy is asked through his parent or guardian to declare whether he wishes to begin instruction in English or Italian. Then he goes on to the 3rd and 4th Standards; but when he comes up to the 5th Standard the child has to take up that other language which he had not chosen before. Children who take up English in the 3rd and 4th Standards, when they come to the 5th and 6th Standards are obliged to take Italian. Therefore, in the 5th and 6th and 7th they learn both English and Italian, and it is thought that although the second language is taken up at a later stage, yet a boy will be able at the end of his seven years' course to have generally an equal knowledge of the two languages; in the course of things naturally one may have a leaning to one language more than another, therefore a boy might know more English than Italian, but generally speaking he would have an equal knowledge of both languages.

The choice is therefore made upon two occasions. First, in connection with colloquial instruction, and also in connection with the second language. But in addition to this another choice is made, and this is by virtue of a clause of the Order in Council passed in 1901, which is to the following effect:—

“The parents or guardians of any student who is a candidate for admission to the Lyceum or University shall have the option of determining whether that student shall be examined in English or Italian or in both English and Italian, and no student shall be disqualified from obtaining any scholastic or University preferment or degree, or from obtaining admission to the University or Lyceum, or promotion from a lower to a higher class therein if he satisfies the examiners in either English or Italian, and the Governor may, with respect to the University, and Lyceum, from time to time, make such regulations as to the manner of imparting instruction or otherwise, as may be necessary for carrying out the provisions of this Order, and the provisions contained in section 5 of Ordinance XII. of 1898 shall not be applicable, provided that in the Faculty of Theology instruction shall be given only through the medium of Latin or Italian.”

This of course refers to the University and the Lyceum, but the same provisions apply to the elementary schools.

The teachers naturally are obliged to study the two languages. They must know Italian and they must know English. We have a lower class of teachers, which we call assistant teachers. They are taught in a normal school, a training school locally, but for the higher-class teachers and the head teachers of different elementary schools, of which we have now a hundred, we are sending every year a certain number

to England. They are sent here for training, a two-years' course of training in England, and after they get their diploma they go back to Malta and take charge of the schools. We do not find much difficulty with regard to the teachers.

Mr. WARRE CORNISH : I should like to ask Signor Magro about what percentage of the children in the elementary schools leave school without having passed out of the 4th Standard. Perhaps it would be difficult to give it off-hand.

Prof. MAGRO : You have just touched upon one of our weakest points in Malta. We are building as fast as possible, as fast as our funds will permit, schools, immense schools, some of them very fine, but under the circumstances we cannot keep up with the demand. The children are taken away rather early in some instances. I remember four or five years ago I calculated the average age at which the children left school, and I found that, taking both the country and the town schools, the average age at which the children left school was 9·4 years. Of course, that does not mean that at the town schools and the bigger schools the children leave at that age. In those big schools the children remain and go on with their studies till 17, but in the country schools the tendency is for the children to leave at an early age.

Mr. WARRE CORNISH : Could Dr. Viljoen answer the same question. It makes such a difference to one's information to know just exactly how many children are likely to be affected by the particular change in the regulation ; about what percentage would pass beyond Standard IV. ?

Dr. VILJOEN : Mr. Chairman, the very fact that we are drawing a line, as I said before—a line of demarcation—at Standard IV., shows clearly that by far the large majority of children leave school about Standard IV. Those who would be affected by the existing regulations—the ordinary regulations of Standard IV.—would be the minority of school-going children. But it is a very difficult question to answer, because we have a very vast extent of country. There are those four immense provinces, and I do not think that the figures correspond everywhere. I might say that especially in the rural districts I think about two-thirds of the children leave school at Standard IV. or below ; do not proceed above Standard IV.

The CHAIRMAN : Is there anybody else who wishes to speak ?
(*After a pause.*)

The CHAIRMAN : I think we have had a very interesting discussion, and we might now adjourn.

Sir W. VENABLES-VERNON : Before we adjourn, gentlemen, I think we owe it to ourselves to express our thanks to Mr. Runciman for having called us together and given us an opportunity for this most interesting discussion and conference, and to the Chairman for presiding over us. I beg to move.

The CHAIRMAN : I am sure we are delighted to have met you here.

The Proceedings then terminated.

APPENDIX II.

ADDRESS OF WELCOME BY THE PRIME MINISTER ON THE OCCASION OF A DINNER GIVEN TO THE OFFICIAL REPRESENTATIVES AT THE IMPERIAL EDUCATION CONFERENCE ON BEHALF OF HIS MAJESTY'S GOVERNMENT ON THE 26TH APRIL 1911, AT THE HOUSE OF COMMONS.

The Right Honourable Walter Runciman, M.P., President of the Board of Education, presided. There were present the Secretary of State for the Colonies and other members of His Majesty's Government. Mr. Asquith said :—

"I cannot forego the opportunity of conveying to you gentlemen, who represent so many different parts of the Empire, on behalf of His Majesty's Government, our most cordial welcome here this evening, and of saying how glad we are that you should surround these tables in the precincts of the ancient Mother of Parliaments. Education is a thing about which there is nothing new to be said, and if there were I should not be the person to say it. Like all the other arts, it consists, I suppose, in a struggle between form and matter, and in the case of education—certainly education as we understand it within the borders of our Empire—without undue pride and self-complacency we may say that we have the finest raw material in the world, and the manner in which that raw material should be impressed and turned out depends upon the teachers.

"If I may venture to say one serious word as to what I think ought to be the aim—the governing aim and purpose—of a Conference of this kind, I think it is to secure that formative touch and to see that the power throughout the British Empire should be developed on the best lines, with the greatest efficiency, and with the most complete equipment ; and, if these conditions are satisfied we are convinced that with the raw material at hand the most brilliant and satisfying results can be obtained. If a Conference of this kind, representing the Imperial Governments, could co-ordinate in the way of information and in the way of effort the latent resources of the Empire and make provision for a really efficient, vital, and vigorous teaching system, we should have contributed more to the real consolidation of the Empire and the happiness of our people than by many of the so-called social reforms of to-day. I am delighted to see before me so many of you who are qualified, not only by sympathy but by practical experience, to interest yourselves in that great ideal, and I trust that the assembling of this Conference may tend to the provision of some more satisfactory machinery and means for its accomplishment. As regards the end in view I believe we are all at one, and that is to make the British people throughout the length and breadth of the Empire a truly instructed nation."





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Imperial Education Conference, London, 1911
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